Proficiency-based High School Diploma Systems in Maine: Implications for Special Education and Career and Technical Education Programming and Student Populations

Erika Stump

Amy Johnson

Cathy Jacobs

March 2017



Center for Education Policy, Applied Research, and Evaluation

Published by the Maine Education Policy Research Institute in the Center for Education Policy, Applied Research, and Evaluation (CEPARE) in the School of Education and Human Development, University of Southern Maine.

CEPARE provides assistance to school districts, agencies, organizations, and university faculty by conducting research, evaluation, and policy studies.

In addition, CEPARE co-directs the Maine Education Policy Research Institute (MEPRI), an institute jointly funded by the Maine State Legislature and the University of Maine System. This institute was established to conduct studies on Maine education policy and the Maine public education system for the Maine Legislature.

Statements and opinions by the authors do not necessarily reflect a position or policy of the Maine Education Policy Research Institute, nor any of its members, and no official endorsement by them should be inferred.

The University of Southern Maine does not discriminate on the basis of race, color, religion, sex, sexual orientation, national origin or citizenship status, age, disability, or veteran's status and shall comply with Section 504, Title IX, and the A.D.A in employment, education, and in all other areas of the University. The University provides reasonable accommodations to qualified individuals with disabilities upon request.

This study was funded by the Maine State Legislature, and the University of Maine System.

Copyright © 2017, Center for Education Policy, Applied Research, & Evaluation.

A Center of the
School of Education and
Human Development

140 School Street, Gorham, ME 04038
(207) 780-5044; TTY (207) 780-5646
www.cepare.usm.maine.edu
A member of the University of Maine System

Table of Contents

Executive Summary i

Context: National Standards-based Education 1

Context: Proficiency-based Education Policy & Research in Maine 2

Review of Literature (Part A - Special Education) 9
- Framework of State & Federal Policies: Students with Disabilities 9
- State and Federal Laws & Regulations: Students with Disabilities 11
- State and Federal Policies & Guidance: Standards for Students with Disabilities 13
- Proficiency-based Graduation Policies in Other States 15

Methodology (Part A - Special Education) 18
- Sample 18
- Data Collection & Analysis 18

Findings (Part A - Special Education) 20
- Question: What are the common, required standards? 21
- Question: What is the required level of proficiency? 23
- Concern: Lower High School Graduation Rates 25
- Concern: Increasing Due Process Cases 26
- Concern: Insufficient Resources 26
- Benefit: Increased Professional Collaboration 27
- Conclusions 28

Review of Literature (Part B - Career and Technical Education) 31
- National Historical Context: Perceptions and Policies Involving CTE 31
- National Recent Context: CTE Student Population & Policy Implementation 32
- National Context: CTE and Standards-based Education 33
- Maine Context: Secondary CTE Programs and Student Population 34
- Maine Context: Proficiency-based Diploma Policy and CTE 35

Methodology (Part B - Career and Technical Education) 40
- Sample 41
- Data Collection & Analysis 41

Findings (Part B - Career and Technical Education) 42
- Early Stages of Implementation & Awareness 42
- Sending District as Diploma-awarding Institution 43
- Aligning Academic - CTE Standards 46
- Academic Proficiency as Prerequisite to CTE 50
- CTE as Standards-based Education Model 51
- Conclusions 52

Recommendations 55

References 57

Appendix A: USDOE FAPE Guidance Letter, 2015 62

Appendix B: MDOE Proficiency Diploma Guidance, 2017 68

Appendix C: MDOE *Policy on Standards-based IEP Goals*, 2015 70

Appendix D: Special Education (Part A) Interview Protocol **72**
Appendix E: Special Purpose Private Schools Plan of Instruction **79**
Appendix F: SPPS - SAU Diploma Agreement **81**
Appendix G: Sample Proficiency-based High School Graduation Requirements **83**
Appendix H: NATEF Automotive Technology Curriculum Crosswalk **94**
Appendix I: American Culinary Federation and CCSS Mathematics Standards **95**
Appendix J: Career & Technical Education (Part B) Interview Protocol **105**

Executive Summary

In the 127th Legislative Session, *An Act to Implement Certain Recommendations of the Maine Proficiency Education Council* (S.P. 660 - L.D. 1627) was passed into law as Chapter 489 amending the chaptered law, *An Act to Prepare Maine People for the Future Economy* (S.P.439 - L.D.1422), passed in 2012 requiring Maine school districts to implement proficiency-based diploma requirements and standards-based education systems.

Beginning in 2012, the Maine Legislature's Joint Standing Committee on Education and Cultural Affairs has requested that the Maine Education Policy Research Institute's (MEPRI) annual work plan include studies designed to compile data, examine progress and explore impacts regarding implementation of this state policy within local institutions and school districts across the state. This work has furthered the understanding of these proficiency-based diploma policies within the state and global context as well as the implementation work in local schools and school administrative units.

In 2016-2017, Phase V of this study shifted from the general perceptions and practices of schools and districts implementing proficiency-based high school diploma systems (as explored in Phases I-IV) to the examination of the policy implications within key programs, contexts and populations. This report shares research conducted to examine the impacts of implementing proficiency-based diploma systems as it relates to programming and student populations in special education and career and technical education.

A persistent theme among Maine's public educators and educational leaders participating in this research was the concern for students with disabilities who may have been able to meet traditional high school graduation requirements based on earning course credits through successful completion of classwork but would not be able to demonstrate high school level proficiency in all eight content area standards by age twenty under Maine's new diploma law. There was evident uncertainty about how districts could interpret Maine's state law and the distinctions between law, regulation and guidance.

Most districts in this study that had developed or were working to develop a proficiency-based diploma system that created common expectations and language within the district's standards-based curriculum in the required eight content areas utilizing common national or state

standards as available. However, variation of selected language, grade-level application and content within academic standards was evident within curriculum sequence and common assessments in Maine's public school districts. Locally-developed high school graduation requirements determine the level of proficiency that students must demonstrate to earn a high school diploma. State law does not define proficiency; guidance from the Maine Department of Education (MDOE) has urged districts to adopt "high school level" proficiency requirements. Significant variation of specificity, complexity and interpretation of proficiency-based graduation requirements was evident among Maine public school districts. Local graduation requirements reflected minimum standards ranging from eighth grade to twelfth grade level content and skills as well as vaguely worded standards that could be interpreted at a multitude of levels and explicit standards requiring specific high school level skill demonstration. Evidence from this research suggests that in school districts implementing more rigorous, specific proficiency-based high school graduation requirements applicable to all students, with or without disabilities, graduation rates may decline disproportionately in comparison to school districts with more general or less-rigorous local policies.

Increased “due process” cases were predicted by many participants in this study. Since most local high school proficiency-based graduation policies apply to future graduating classes and there is no currently-implemented comparable law in other states or past history, further research would be necessary to surmise a conclusion about this concern. District leaders have already reported increased costs to provide additional services and supports to students who are not on target to demonstrate the required proficiencies in thirteen years of public schooling. Also, especially with regard to students with disabilities who are more than two or three years behind age-based grade level, participants have indicated their current system resources do not allow their schools to provide the necessary supports for all students demonstrate grade twelve proficiency levels by age twenty years old.

Educators and administrators from multiple schools and districts across the state reported increased collaboration between special education teachers and regular education teachers within their districts at various grade levels. SAU administrators indicated that increased funding, resources or opportunities were needed to continue to develop and sustain these opportunities for collective professional work.

Participants in this study from career and technical education schools (CTEs), pre-professional education programs and public SAUs shared the following common challenges and benefits of engaging in CTE programs under the most recent high school graduation requirements. Since the public SAU is the diploma-awarding institution, the final decision regarding a student's eligibility to earn a high school diploma is not within the realm of the CTE or pre-professional program. This meant CTE and pre-professional administrators spent significant time connecting with sending district administrators to develop agreements. In addition, programs receiving students from multiple districts did not have a common set of expectations, data management systems, grading policies, academic curricula standards or high school graduation requirements for all students in their school.

There has been deliberate effort from the federal, state and local levels to articulate alignment between standards in required content areas and CTE or pre-professional programming. However, this work has revealed that CTE curricula rarely incorporate academic standards comprehensively and academic curricula do not cover all CTE course industry standards. Since many industry certifications, exams or determinations of proficiency are developed for adult professionals with workplace experience, high school students do not consistently have the opportunity to demonstrate proficiency in industry standards in secondary school experiences. In addition, many CTE educators in this study indicated that the nationally-recognized, standards-based curricula of their program expected students to enter their programs with certain academic skills. The curricula and professional training of instructors did not include teaching fundamental skills in mathematics or literacy; it approached these skills as prerequisite knowledge for students in their classes.

Despite these challenges, many CTE educators and leaders described curriculum development, assessment practices and instruction in their courses that reflected a strong, established understanding and demonstration of standards-based education. CTE coursework and assessments have been competency-based for decades. The stringent process by which a CTE program is approved and reviewed requires implementation of standards-based education, proficiency-based reporting and individualized instruction. Therefore, many CTE educators in this study encouraged leaders and educators from across the state of Maine to recognize them as a resource and model for developing standards-based education systems and proficiency-based credentialing policies.

Proficiency-based High School Diploma Systems in Maine: Implications for Special Education and Career Technical Education Programming and Student Populations

Maine Education Policy Research Institute

Context: National Standards-based Education

Although present in education practice and theory for decades, the publication of *A Nation at Risk* (National Commission on Excellence in Education, 1983) provided standards-based education greater traction in U.S. public schools. In the following two decades, several states (e.g., California, Kentucky, Maryland, Massachusetts, North Carolina and Texas) and professional organizations (e.g., American Association for Advancement of Science; National Council of Teachers of English; National Council of Teachers of Mathematics) began integrating work involving standards-based education methods. In 1994, *Goals 2000: Educate America Act* (PL 103-227) was developed to assist states in creating statewide academic standards and created momentum for the nationwide movement towards standards-based education to obtain related funding (Armour-Garb, 2007; Cross, 2004).

In 2001, the No Child Left Behind (NCLB) Act was passed. Using the 1965 *Elementary and Secondary Education Act* (ESEA) as a precursor and receiving bipartisan support, NCLB embraced a standards-based accountability approach by requiring annual standardized testing and Adequate Yearly Progress for schools to receive Title I funding. Since NCLB was signed into law, many school districts across the U.S. have worked to implement standards-based education. Nationally, forty-six states and the District of Columbia have adopted the Common Core State Standards (CCSS, 2010), which identify content area skills and knowledge students should be able to demonstrate in Mathematics and English Language Arts so as to be college and career ready by the completion of high school.

Correspondingly, a number of national evaluations of CCSS have examined the implementation and impact of standards-based education on student outcomes. The findings suggest that many states have varied definitions of proficiency and dissimilar standards (Carmichael et al., 2010; Jennings & Bearak, 2014; Lee, Liu, Amo & Wang, 2014; Phillips, 2016; Porter, Polikoff & Smithson, 2009). A lack of common operational definitions may

complicate the attempt to draw causal conclusions regarding the "success" of standards-based education from related literature as well as local efforts to analyze internal data or implement experimental interventions with fidelity. However, it is evident that the interrelated and contextual nature of implementing related standards-based policies must be recognized in order to better understand intended and unintended impacts (Honig, 2006; Young & Lewis, 2015).

While research evidence from Maine supports findings from the national literature which emphasize that changes must be implemented at the systems-level in order to yield the intended results of increased college and career readiness (Chrispeels & Gonzalez, 2006; Noell & Gansle, 2009; Stump & Silvernail, 2014), the contexts of schooling cumulatively inform students' real experiences across their classrooms, institutions, districts and communities, with each level working concurrently to put these reforms into practice.

Context: Proficiency-based Education Policy & Research in Maine

Culminating standards-based work from earlier decades, the *Maine Learning Results* were adopted by the Maine Legislature as statewide K-12 education standards in 1997 with the passing of *Resolve, Regarding Legislative Review of Chapter 131: Rules for Learning Results, a Major Substantive Rule of the Department of Education* (H.P. 1093 - L.D. 1536). These standards, developed by Maine educators and educational leaders, included eight academic content areas as well as "Guiding Principles" that reflected expectations of high school graduates to demonstrate civic engagement in addition to certain habits of work and mind. Rule Chapter 131 for the Maine Department of Education (MDOE) described the content standards to be in effect starting in 2012 as "College and Career Readiness Anchor Standards" for the included content areas. School districts aligned curriculum, local assessments and professional development to these standards in various degrees across the state during this time.

The *Maine Learning Results: Parameters for Essential Instruction* were reviewed and then updated in 2007, with critical changes to content areas standards and the guiding principles. At that time, legislation was passed requiring the annual state assessments to reflect students' proficiency levels as defined by the updated standards in Mathematics, Reading, and Science. In addition, the updated *Maine Learning Results* were formally integrated within state policies related to school funding and school accountability measures. Although a statewide attempt to

require a common local assessment system based on the *Maine Learning Results* standards ended unsuccessfully in this same year, practitioners had dedicated significant time across the past decades discussing standards with students as well as building standards-based curricula and assessments (Leiberman & Miller, 2011; Stump, Silvernail, Fallona & Moran Gunn, 2013; Stump & Silvernail, 2014). In 2011, Maine adopted the Common Core State Standards in Mathematics and English Language Arts. Although state law and the Maine Constitution prohibit a mandatory statewide curriculum, the Maine Department of Education (MDOE) encouraged and supported local efforts to align curricula and assessments to the state-developed *Maine Learning Results*.

In May 2012, the 125th Maine Legislature passed the chaptered law, *An Act to Prepare Maine People for the Future Economy* (S.P.439 - L.D.1422). Within this mandate, Subsection (§) 4722-A describes the required components of the proficiency-based high school diploma, which all public Maine school districts were expected to incorporate by 2018, replacing the previous version of Title 20-A, Part 3, Chapter 207-A, Subchapter 3, Subsection 4722 including time-based subject requirements. In 2015, the MDOE granted extensions postponing the deadline for full implementation into 2020 for many public school districts in the state. Again, although curriculum, teaching practices, local assessments and learning materials are determined entirely at the district or school level, this state law required school administrative units to implement high school graduation requirements that were dependent upon students demonstrating proficiency in the eight content areas and guiding principles of the *Maine Learning Results*.

In the 127th Legislative Session, *An Act to Implement Certain Recommendations of the Maine Proficiency Education Council* (S.P. 660 - L.D. 1627) was passed into law in Chapter 489. This more recent legislation amended the original 2012 proficiency-based education law in several ways, including:

- Adapting the timeline for mandated phase-in of §4722-A, local high school diploma requirements reflecting student demonstration of proficiency replacing previous §4722, starting in 2020-2021 (with four core content areas required) and completing implementation in 2024-2025 (with eight content areas and guiding principles required);
- Defining expectations of students with disabilities to "become eligible for a diploma by demonstrating proficiency in state standards established in the system of learning results

through performance tasks and accommodations that maintain the integrity of the standards as specified in the student's individualized education program by the student's individualized education program team..."

- Requiring that schools must maintain a "permanent academic transcript" for each student, on which a school administrative unit must certify each student's achievement of proficiency in each content area and the guiding principles as well as report content area proficiency certifications to the Maine Department of Education;
- Requiring the Commissioner adopt or amend rules by January 2, 2017 to "allow local flexibility and innovation" and "identify the manner in which the opportunities for learning in multiple pathways of career and technical education programs may be used to satisfy certain components of the system;"
- Amending prior language of "*student* shall study" in all eight content areas to say that the *school* "shall ensure sufficient opportunity and capacity through multiple pathways for all students to study and achieve proficiency" in the required eight content areas.
- Allowing exception to the high school graduation requirements for students completing a CTE program of studies and earning specified CTE credentials, omitting the requirement of "educational experiences" in ELA, mathematics and science and reducing the requirement of demonstrating proficiency in all eight content areas to six content areas, including ELA, math, social studies and three additional content areas of the student's choice.

Maine's education history reveals a strong tradition of standards-based education with on-going, complex implementation occurring in schools and classrooms across the state reinforced by substantial investment and support from various local business organizations and education reform agencies. This work has been underscored by the proficiency-based high school diploma systems mandated and updated in the most recent state legislation. To further understand these proficiency-based diploma policies within the state and global context as well as the implementation work in local schools and school administrative units, the Maine Legislature's Joint Standing Committee on Education and Cultural Affairs has requested that the Maine Education Policy Research Institute's (MEPRI) work plan for the past five years include studies designed to compile data, examine progress and explore impacts regarding implementation of this state policy within local institutions and school districts across the state. MEPRI is a

nonpartisan research institute funded jointly by the Maine State Legislature and the University of Maine System, with a mandate to collect and analyze education information and perform targeted education research for the Legislature.

A summary of each phase of this ongoing study's findings is presented below. Detailed evidence from this year's targeted research regarding implications for student populations and programming within special education and career technical education as part of Phase V work is discussed in the "Findings" sections of this report.

Phase I: Preliminary Implementation of Proficiency-based Diploma Systems in Maine (A School Level Analysis)

In 2012, MEPRI conducted an initial study that examined the preliminary development, costs and impacts of standards-based *school* programs being implemented in Maine. Nine public institutions, including those representing various configurations of grades PK-12, served as case studies in which this approach was being practiced in some or all classrooms.

This study revealed that Maine educators and educational leaders were working diligently to embrace and apply the underlying philosophies of standards-based education as well as build systems applicable to their local context. Institutions beyond the initial phase of shifting belief structures and school culture were grappling with the logistics of implementing some of the changes they saw as necessary within curriculum, scheduling, staffing and reporting achievement. Further discussion of the findings from Phase I of this study of Maine public institutions may be found in the report, *Preliminary Implementation of Maine's Proficiency-Based Diploma Program*, or available at <mepri.maine.edu>.

Phase II: Implementation of Proficiency-Based Diploma Systems in Maine (A District Level Analysis)

After sharing the findings and recommendations of Phase I with the Maine Legislature's Joint Standing Committee on Education and Cultural Affairs and in the publication of the report mentioned above, a second year of the study was commissioned in 2013 to focus on school *districts* that were in the process of systemically implementing S.P.439-L.D.1422. Phase II examined the systemic benefits and challenges of putting this state law into practice. Findings

revealed that district leaders were working attentively to implement these policies with fidelity. District leaders also indicated that a key goal of their implementation was developing practices and policies that were beneficial to all students in their district even when practitioners were faced with challenges of creating common definitions, developing practical learning management systems and finding resources to support their work. Further discussion of district implementation of the law examined in Phase II of this study may be found in the report, *Implementation of a Proficiency-Based Diploma System in Maine: Phase II - District Level Analysis*, available at <mepri.maine.edu>.

Phase III: Implementing Proficiency-Based Diploma Systems in Maine
(An Analysis of District-Level High School Graduation Policies)

In 2014, the MDOE required public school districts to submit a Confirmation of Readiness or an Extension Application outlining the policies and practices in place and planned for implementation of a proficiency-based diploma system. Subsequently, the MDOE provided a response letter with feedback and recommended action to each district as well as conducted several in-person district visits. Maine's law S.P.439-L.D.1422 required students to demonstrate proficiency in eight content areas (English Language Arts, Mathematics, Science and Technology, Social Studies, Health Education and Physical Education, Visual and Performing Arts, Career and Education Development as well as World Languages) in order to earn a high school diploma. This third phase of the MEPRI study focused on *high school graduation requirements* in the content areas of English Language Arts (ELA), Mathematics and Science. Many of the district policies and proposals were intended to eventually apply to all eight mandated content areas. However, ELA, Mathematics and Science were the areas with the most substantial level of implementation and established policy development within local districts at this point.

In Phase III of the study, a comprehensive examination of the application documents, practices, policies and standards of several case study districts provided insights into the development of local high school graduation policies aligned with Maine's proficiency-based diploma legislation. In addition, high school administrators and district leaders in case study districts were interviewed and discussed the continued impact of this state policy on their local district and institutions. Participants indicated that building a proficiency-based diploma system

had encouraged more professional collaboration in institutions, improved transparency in communication about student achievement, and had inspired school improvement efforts in some districts. The data revealed that districts were working diligently to align PK-12 curricula and policies to their local standards as well as developing common language and expectations within the district. However, comparing the academic content standards and definitions of proficiency from various school districts across the state highlighted many practices and policies that were not common statewide. Implementing this state policy appeared to require substantial professional work. School and district administrators suggested that they wanted greater clarity and consistency from the state level with regard to the required components of the law. But, local stakeholders also adamantly supported the retention of local control over defining proficiency benchmarks and developing standards that were perceived as accessible and relevant to their student population. Further discussion of high school graduation policies examined in Phase III of this study may be found in the report, *Proficiency-based Diploma Systems in Maine: Implementing District-level High School Graduation Policies (Phase III Technical Policy Report)*, available at <mepri.maine.edu>.

Phase IV: Implementing Proficiency-Based Diploma Systems in Maine
(A Longitudinal and Updated District Level Analysis)

Phase IV of this study collected data from qualitative interviews and document analysis in six case study school *districts* in 2015. Three of these districts had been involved in at least one year of Phase I-III of this study, allowing for exploration of ongoing implementation practices and comparing perceived challenges and benefits from initial implementation to later stages. School districts were still at various stages of implementation and utilizing proficiency benchmarks and language to describe content standards that were varied across the state yet increasingly common within a district. Findings from Phase IV suggested that school districts made great strides and were continuing work to improve interventions to support students who did not meet the standards. Where these proficiency-based diploma systems had been enacted, increased communication and strategies for remediation were reported as advancing student performance and contributing to an enhanced culture of learning. This work encompassed increased collaboration among teachers, families and leaders surrounding students' progress, and many educators spoke of the benefits of "breaking down the walls" of the teaching profession.

School and district administrators described public relations and systems-wide strategies that facilitated communication within their organizations and the community at large as well as the challenges of implementing this state mandate.

Further discussion of impacts of implementation examined in Phase IV of this study may be found in the report, *Proficiency-based High School Diploma Systems in Maine: Local Implementation of State Standards-based Policy*, available at <mepri.maine.edu>.

Phase V: Implementing Proficiency-Based Diploma Systems in Maine (Implications for College and Career Access, Special Education, Career and Technical Education, and High School Graduation Standards)

In 2016-2017, Phase V of this study shifted from the general perceptions and practices of institutions and districts implementing proficiency-based high school diploma systems to the examination of the policy implications within key programs, contexts and populations. Document review and interviews were conducted with *college* admissions' personnel to gather data regarding alignment of proficiency-based diploma systems and college eligibility and entry requirements. In addition, leaders and representative personnel from and Maine businesses and the U.S. military were interviewed to identify postsecondary *career* entry requirements and attributes of high quality workers. Another area of inquiry in this phase of the study included analysis of data from interviews with leaders and educators in *Special Education* to examine the perceived challenges, benefits and impacts of this diploma policy on students with identified disabilities and special education programming provided by Maine's public PK-12 school districts. In addition, qualitative case studies of a sample of Maine *Career and Technical Education* centers and regional vocational programs were conducted. Finally, a single school district case study was incorporated into this phase of the research to closely examine Maine public educators' and school administrators' interpretations and perceptions of establishing standards and *defining proficiency* levels in content areas and developing district-level policies for proficiency-based high school graduation policies.

Therefore, Phase V of this study examining implementation of Maine's proficiency-based high school diploma policy explores several facets of the immediate and wider contexts of schooling in a series of three reports. This report focuses on the contexts of special education and

career technical education in public school districts, specifically secondary schools. In this way, Part A of this Phase V report shares existing research literature regarding special education as well as empirical data from document review and interviews with experts in the field of special education, including educators, administrators and legal specialists. Part B of this Phase V report offers a review of research literature about secondary-level career and technical education as well as empirical data from qualitative interviews with administrators of Maine CTEs, Regional Vocational Centers and pre-professional training organizations.

Review of Literature (Part A - Special Education)

Framework of State & Federal Policies: Students with Disabilities

There are many moving parts that come together in the policies involving the public rights to education for students with disabilities in PK-12 public schools in the United States. To fully understand the complexity and distinctions among the materials related to special education, it can be helpful to identify the level of policy as local, state or federal and the information's status as guidance, regulation or law.

To summarize the policies affecting students with disabilities, federal and state **law**, as the product of a passed statute, indicates that all children in grades K-12 must have access to and opportunity to progress within a common educational curriculum. There is no requirement within federal or state law that an individual student achieve a certain proficiency level or earn a high school diploma. (Evidence of discrimination preventing certain groups of students (race, gender, disability, etc.) from reasonable achievement does have precedent in case law.) The Rehabilitation Act of 1973 outlines the responsibilities of states and federal in serving individuals with disabilities, including §504:

> "No otherwise qualified individual with a disability in the United States . . . shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance . . ." 29 U.S.C. 794(a)

These programs and activities include public education institutions (schools) and agencies, and this law broadly defines "disability." This is the law under which many students develop a "504 plan" for modifications or accommodations to their education.

In 1975, the Education for All Handicapped Children Act was enacted to allow for evaluation and an educational plan that placed students with disabilities in the least-restrictive educational environment and alongside their peers whenever possible. In 1990, the Individuals with Disabilities Education Act (IDEA) was passed, replacing the 1975 law and requiring that students with disabilities be provided a Free Appropriate Public Education (FAPE). IDEA was most recently re-authorized in 2004. This federal law mandates that a designated team of professionals develops an Individualized Education Program (IEP) outlining the accommodations and modifications necessary for a child with a disability to participate and progress within the general curriculum and personalized academic goals relative to his/her enrolled grade level.

Regulations (also called rules) are mandated within law and developed by administrative agencies to guide implementation and describe how laws will be implemented and enforced. Regarding the education of students with disabilities, current state and federal regulations reiterate the right of every child to participate in and progress through a curriculum aligned with grade-appropriate academic standards that are common to those established for students without disabilities. Accommodations and modifications may be made to allow access and ensure progress, but student outcomes are not individually mandated in state or federal regulations. The federal law does require students with disabilities to "demonstrate progress" on IEP goals that are "reasonably calculated to provide educational benefit." State-level accountability usually comes in the form of reporting aggregated student information, and enforcement often falls within the realm of eligibility for funding or resources. Upholding the Fifth Amendment of the U.S. Constitution, which states, "no person shall…be deprived of life, liberty, or property, without due process of law," IDEA regulations reiterate the parental right to due process ((B) §300.311-315) if they believe that an IEP is inappropriate for their child or their child is not receiving the appropriate special education services necessary to equitably access and benefit from the general curriculum. The parental right to due process can provide accountability at the local school and district level with regard to individual students.

To further clarify law, statute or regulation, state agencies or officials often release **guidance** or memos explicating certain components of a law and offering recommendations for adherence and implementation. Laws and regulations are mandated and enforced; guidance is not mandated and does not usually include measures of accountability. See Appendix A for USDOE

guidance letter regarding standards-based IEP development. See Appendix B and C for MDOE guidance documents regarding proficiency-based high school diplomas and students with disabilities.

State and Federal Laws & Regulations: Students with Disabilities

There are multiple state and federal laws, statutes and regulations intended to ensure that students with disabilities are able to access and benefit from public education. The United States' federal laws, including *Elementary and Secondary Education Act (*ESEA) of 1965 (reauthorized in 2015 under the *Every Student Succeeds Act* (ESSA)) and *Individuals with Disabilities Education Act of 2004* (IDEA), pursue the goal of providing equitable access and improved educational outcomes for all students. Both of these federal laws include substantial regulations for implementation. The law of ESSA was approved in Congress and signed by the President in 2015, but many of its regulations are still being developed or reviewed by the new White House Administration. IDEA requires states to have a plan that is subject to federal approval in order to receive related grant funding; regulations for this plan include two key sections regarding students with disabilities: a) *34 Code of Federal Regulations (CFR) Part 300. Assistance to States for the Education of Children with Disabilities* and b) *34 CFR Part 303. Early Intervention Program for Infants and Toddlers with Disabilities*. Other related federal regulations for students with disabilities are included within the *Family Education Rights and Privacy Act (*FERPA*), An Act to Replace the Vocational Rehabilitation Act* of 1973 and *Americans with Disabilities Act (*ADA*)*.

According to the federal government, the central principles of the federal laws and regulations is to ensure that all students, including students with disabilities, have the opportunity to be "involved in and make progress in the general education curriculum" (IDEA 20 USC § 1414(d)(1)(A). USDOE regulations identify the general education curriculum as "the same curriculum as for nondisabled children" (IDEA 34 CFR §300.320(a)(1)(i). Special education services are intended to "address the unique needs of the child that result from the child's disability and to ensure access of the child to the general curriculum, so that the child can meet the educational standards within the jurisdiction of the public agency that apply to all children (IDEA 34 CFR #300.39(b)(3)" (USDOE, 2015). These regulations also require all students enrolled in public schools to participate in the state's yearly student academic assessments.

Reasonable modifications and accommodations must be made for students with disabilities if needed (IDEA § 602 (3)) to demonstrate performance levels relative to state academic content and achievement standards (ESEA § 1111(b)(3)(C)(ii)). If a child is identified as having the "most significant cognitive disabilities," alternate state assessments based on modified achievement standards may be offered, and extensive guidelines delineate the parameters and definitions of "alternate assessments" (IDEA § 612(a)(16)(A)).

At the state level, the 1820 Constitution of the State of Maine established the general principle of education as a public right:

> A general diffusion of the advantages of education being essential to the preservation of the rights and liberties of the people; to promote this important object, the Legislature are authorized, and it shall be their duty to require, the several towns to make suitable provision, at their own expense, for the support and maintenance of public schools.

Current state laws specific to the rights of students with disabilities include three chapters within *Title 20-A: Education (Maine Revised Statutes Annotated)*: a) *Chapter 301: General Provisions §7001-7007,* b) *Chapter 303: Children with Disabilities §7201-7302,* and c) *Chapter 304: Maine Educational Center for the Deaf and Hard of Hearing and the Governor Baxter School for the Deaf §7401-7413*. In addition, *Chapter 101* adopted in 2015 identifies governing rules and procedural safeguards within *Maine Unified Special Education Regulation, Birth to Age Twenty*, identifying one purpose of the chapter as "non-discrimination:"

> Children in Maine, birth to twenty who have disabilities, may not be excluded from the benefits of services to which they are entitled under IDEA. The [Maine] Department of Education shall ensure the provision of appropriate services regardless of the nature and severity of the child's disability or developmental delay. A full range of services that are needed to meet the Part C early intervention and Part B free appropriate public education needs of eligible children and their families will be coordinated and delivered in a manner consistent with the practices set forth in this rule and applicable State and federal law and regulation. The State must ensure that each SAU takes steps to ensure that its children with disabilities have available to them the variety of educational programs and services available to non-disabled children in the area served by the agency, including art, music, industrial arts, consumer and homemaking education, and vocational education.

In this way, special education services can offer "specialized instruction" or accommodations and modifications to allow students with disabilities equal access to the public education experience, and the State offers dedicated resources and policy to uphold these related federal laws and regulations.

State and Federal Policies & Guidance: Standards for Students with Disabilities

Federal law indicates that school personnel are required to develop with students with disabilities and their families an "individualized education program" (IEP) explicating modifications and accommodations needed for participation in assessments or justification for alternate assessments (IDEA § 614(d)(1)(A)(V) and (VI)) as well as developmentally-appropriate academic and/or behavioral goals. The USDOE has clarified in guidance documents that the "**same academic content standards must apply to all public schools and children, including children with disabilities**" and the IEP goals must align with grade level enrollment standards (2015). {See Appendix A for full text of the USDOE FAPE Guidance Letter.} In a statement of guidance, MDOE (2017) reiterated that proficiency must be demonstrated in all eight content areas required by Maine law by all students (starting with the graduating class of 2025), including students with disabilities, who are awarded a high school diploma: "The IEP cannot change the complexity of thinking or the conceptual understandings or skill level the standards are requiring for demonstration of proficiency." {See Appendix B for full text of the MDOE *Proficiency Diplomas Guidance*.} In addition, *An Act to Replace the Vocational Rehabilitation Act* Section 504 allows for accommodations and assistance in what is commonly referred to as a "504 plan" for eligible students.

It should also be noted that there is no legally-mandated federal definition in law or regulation of "proficient" other than the expectation that academic goals for students with disabilities align with grade-level enrollment standards. These grade-level standards are normed in standardized state assessments as well as assessments frequently used across the U.S. to determine a student's eligibility for special education services. Also, there is neither federal nor state law or rule explicitly identifying specific proficiency levels that must be adopted by states or local school administrative units as high school graduation requirements. "IDEA regulations do not specifically address the connection between the general education curriculum and a State's academic content standards" (USDOE, 2015). IDEA regulations do **require all students to have**

"access to the general education curriculum based on a State's academic content standards for the grade in which the child is enrolled, and includes instruction and supports that will prepare the child for success in college and careers" (USDOE, 2015).

Similarly, Maine state law and Constitution is interpreted by MDOE to prohibit the state from mandating a statewide curriculum or instructional practices (2017) in the general education offerings. The Maine Legislature did adopt statewide *Maine Learning Results* standards in 1997 by passing *Resolve, Regarding Legislative Review of Chapter 131: Rules for Learning Results, a Major Substantive Rule of the Department of Education* (LD 1536, HP1093) submitted by the MDOE pursuant to the Maine Revised Statutes (5) § 8072. As required by these rules, regular review of the standards is conducted. In 2011, after a public review process, updated standards were adopted to include the Common Core standards in English language arts and mathematics.

Recent state legislation, *An Act to Implement Certain Recommendations of the Maine Proficiency Education Council* (S.P. 660 - L.D. 1627), was passed into law as Chapter 489 amending the chaptered law, *An Act to Prepare Maine People for the Future Economy* (S.P.439 - L.D.1422). LD 1627 requires public school administrative units to develop proficiency-based high school graduation requirements inclusive of the eight identified academic content areas and guiding principles standards in the *Maine Learning Results*. Again, no legal or statute-level definition of "proficient" was included in this state legislation, although the MDOE has provided professional support and guidance to educators and schools as they implement proficiency-based diploma systems and local policies. Maine's general requirements of elementary and secondary education articulate the mandatory years of study and content areas in which instruction must be provided as identified in *Title 20-A: Education, Part 3: Elementary and Secondary Education, Chapter 207-A: Instruction*. However, this chapter does not dictate pedagogical approaches or curriculum content for each subject. Also in *Title 20-A: Education, Part 3: Elementary and Secondary Education, Chapter 303: Children with Disabilities*, "diploma requirements" indicate that a student with a disability will be awarded a high school diploma if the student "successfully meets the content standards of the system of learning results...as specified by the goals and objectives of the child's individualized education program" (§7202 (5)(A)).

L.D. 1627 also describes the role of the MDOE in providing guidance and rulemaking relevant to students with disabilities in Section 12:

> The Department of Education shall provide guidance and, as necessary, amend rules in accordance with the rulemaking provisions established under the Maine Revised Statutes, Title 20-A, section 7005, subsection 1 in order to establish strategies by which special education students with individual education plans may demonstrate proficiency in meeting the state standards in and guiding principles established pursuant to the system of learning results established under Title 20-A, section 6209.

In a guidance document of clarification in 2015, the MDOE highlighted requirements reflecting the *Maine Unified Special Education Regulations*, "'Accommodations mean changes in the manner in which instruction and assessment is delivered that does not alter the curriculum level expectation being measured or taught' (§ II.2)." {See Appendix C for full text of the MDOE's *Policy on Standards-based IEP Goals*.}

Title 20-A: Education (Maine Revised Statutes Annotated): Proficiency-based diploma standards and transcripts (*§ 4722-A (3)(A)*) states,

> A student who is a child with a disability, as defined in section 7001, subsection 1-B, may meet the requirements of subsection 1 and become eligible for a diploma by demonstrating proficiency in state standards established in the system of learning results through performance tasks and accommodations that maintain the integrity of the standards as specified in the student's individualized education program by the student's individualized education program team pursuant to the requirements of chapter 301. [2015, c. 489, §2 (AMD).]

Although this subsection has been identified by counsel as legally "ambiguous" (Herlan, 2016), the MDOE reiterated in *Proficiency Diplomas: Guidance for Students with Disabilities* (2017) that for all children, students with and without disabilities, "the complexity of thinking must be at the same level of cognitive demand required by the reporting standard and its performance indicators" to "certify proficiency" and earn a high school diploma. The MDOE has further indicated that the level of rigor of reporting standards should not be modified in an IEP although accommodations and modifications for access and instruction would be deemed appropriate for students with disabilities. {See Appendix B for full text of the MDOE *Proficiency Diplomas Guidance* document.}

Proficiency-based Graduation Policies in Other States

Nationally, forty-six states and the District of Columbia adopted the Common Core State Standards (CCSS). However, "eight states have officially repealed or withdrawn and twenty-one states have finalized...or [have] processes underway" to revise the CCSS used as their state standards (Norton, Bellinger & Ash, 2016). Achieve, Inc. representatives have said, "States who adopt the Common Core State Standards (CCSS) are expected to adopt them in their entirety. While states will not be considered to have adopted the Common Core if any individual standard is left out, states are allowed to augment the standards with an additional 15% of content that a state feels is imperative" (2010). So, current identification of the exact number of states utilizing CCSS but not fully adopting them may vary depending on the level of revision or augmentation.

Regardless of the standards selected for state adoption, multiple states have standards-based requirements or assessments as was mandated under *No Child Left Behind*. This emphasis on standards-based assessment and accountability measures contributed to the passage of legislation encouraging movement towards proficiency-based or competency-based education approaches in many states or development of related policies by state boards of education. Seven states (AK, AZ, GA, IA, OH, OR, UT) have policies **allowing flexibility** in local high school graduation policies to incorporate proficiency-based (a.k.a. "competency-based" or "mastery-based") in addition to or in place of traditional seat-time graduation requirements but not mandating the change to proficiency-based requirements statewide. Two states (FL & IL) have state-funded **pilots** involving proficiency-based assessment or graduation policies in select school districts. One state (Idaho) has **dedicated funds** and resources to its department of education to develop a proficiency-based system. Two states (NH & RI) have policies that require high schools to conduct proficiency-based **assessment practices** at the school or course level. New York has high school graduation requirements that are aligned with demonstrating proficiency on the **state assessments**.

Louisiana has multiple traditional pathways to earning a diploma that include required unit (credit) completion as well as achievement on state assessments. One of these pathways, Jump Start Act 833 Alternative Pathway, does allow students with disabilities the option of having the individual student's IEP team determine "appropriate exit goals, credentials, and individual performance criteria for classroom and [state] assessments the student must meet in order to achieve the standard diploma requirements" (Louisiana Department of Education, 2017) as established in the state statute *Act 833* (formerly H.B. 1015, Regular Session 2014). Officials

from the U.S. Department of Education raised "significant concerns" with Louisiana's law. A letter of guidance to Louisiana schools chief (Yudin, 2015) stated that students with disabilities must continue to be required to "meet the academic content standards that are applicable to all other students in the [local] jurisdiction," but local Louisiana school districts continue to implement the state law.

Vermont's State Board of Education recently adopted the statewide *Education Quality Standards* policy requiring all public high schools' "graduation requirements be rooted in demonstrations of student proficiency" in locally-determined standards including five content areas as well as "global citizenship" and "transferable skills" instead of seat-time (VDOE, 2017) for the graduating classes of 2020 and beyond. There are time-based requirements for physical education classes and physical activity options. Vermont's legislature also passed a proficiency-based high school graduation statute indicating that schools must also ensure all students in grades 7-12 have a Personalized Learning Plan (PLP) (16 V.S.A. §941) describing the individual student's pathway to attain a proficiency-based high school diploma. The PLP does not supplant an IEP, and a guidance document indicates that "students eligible to receive special education services shall meet the same graduation requirements as non-disabled peers in an accommodated and/or modified manner" (Vermont Agency of Education, 2016).

Implementation in Maine is mandated by current law to be partially in place for the high school graduating class of 2021, phasing in complete implementation by 2025. In 2015, the MDOE conducted a survey of public school districts regarding their level of implementation. 116 of the 121 districts replied with some information, indicating that at least 41 (range 41-63) districts were not collecting or reporting data on student proficiency in each content area at the time of the survey (U.S. Education Delivery Institute, 2015).

In summary, although many states are allowing or encouraging proficiency-based diploma policies and practices, **only two states (Maine and Vermont) have laws requiring all public school administrative units to implement proficiency-based high school graduation requirements** in the near future. Therefore, it is only in these two states that proficiency-based high school graduation requirements have potentially changed the expectations required for students with disabilities to earn a high school diploma.

Methodology (Part A - Special Education)

The fifth phase of this ongoing research includes a series of studies examining the impacts of implementing proficiency-based diploma systems within the immediate and wider contexts of public schooling in Maine. This report includes research exploring implications of proficiency-based diploma policy within the contexts PK-12 special education and career technical education programming and student populations, with a focus on the high school level. Part A of this report shares information from investigation of the implications of Maine's proficiency-based high school diploma policy as it relates to special education and was guided by the following research questions:

- How do specific federal policies regarding eligibility and opportunity for PK-12 students in public schools to access and utilize special education services and educational programming relate to Maine's proficiency-based high school graduation state laws, regulations and guidance as well as local school and district policies?
- How do special education teachers and leaders in Maine public schools perceive the facilitators and challenges in supporting and serving students eligible for special education services to earn a proficiency-based high school diploma?

Sample

For this study, existing data was selected from qualitative interviews conducted with special education administrators and educators as part of prior related research studies from 2013 to 2016 examining the impacts of Maine's proficiency-based policy in local schools and districts. This existing data represents 36 individual or focus group interviews from 16 different Maine public school districts and an interview with one attorney who specializes in school law in Maine. In addition, during the winter of 2016-2017, MEPRI researchers from the University of Southern Maine conducted document review and gathered information from interviews with special education administrators and educators in Maine. In order to explore how Maine's proficiency-based high school graduation policies and standards-based education systems were impacting special education programming and student populations, a sample of three special education administrators from three public Maine school districts and one representative from the Office of the Maine Attorney General were interviewed.

Data Collection & Analysis

First, a literature review of national research was conducted to identify foundational federal policies concerning students with disabilities and special education programming with relation to proficiency-based education implementation methods and graduation policies. In addition, literature was examined that explored the approaches of other states working with proficiency-based, standards-based, competency-based or mastery-based education to identify policies and strategies related to special education programming or student populations. For this study, previous MEPRI research focused on the examination of Maine's proficiency-based high school diploma systems (2012 to 2016) was reviewed, and existing empirical data from interviews with special education educators and administrators in public schools and school districts from those prior studies was selected for further analysis. Following the examination of this existing data, research and literature, interview protocols (see Appendix D) were developed to address the following topics:

- Perceptions of the proficiency-based high school diploma system policy in Maine as it relates to secondary students eligible for special education services.
- Perceived facilitators and challenges in implementation of Maine's proficiency-based diploma system policy as it relates to special education programming in PK-12 systems and specifically high schools.
- Potential post-secondary opportunities for students with disabilities who may not earn a high school diploma.

In total, the data analyzed for this study represents 41 in-person interviews representing one law firm, the Office of the Maine Attorney General and 19 Maine public school administrative units. Related public documents detailing local school and district policies were collected from websites and provided by school personnel from the 19 districts represented in this study.

Researcher notes were compiled and analyzed to identify emergent themes in the empirical data as well as patterns corresponding to issues in national literature. The MEPRI research team established key areas of focus as well as significant findings that were unique or divergent. These findings regarding implications of Maine's proficiency-based diploma policy within the contexts of special education programming and student populations in Maine public schools are discussed in this report in the section below.

Findings (Part A - Special Education)

Ongoing research by the Maine Education Policy Research Institute (MEPRI) regarding the impacts of Maine's proficiency-based high school diploma policy indicates that participants are experiencing and predicting a variety of impacts as schools implement this state law. In particular, prior studies on this subject revealed that Maine's special education teachers and leaders raised common questions, concerns and beliefs about the potential benefits of the instructional approaches and local policies being implemented in their schools and districts. Prevalent questions sought to better understand how a standard was defined for required high school graduation criteria and what level of proficiency was necessary for students to meet these graduation requirements. With these questions in mind, participants raised concerns about lower high school graduation rates, increased numbers of due process cases, and limited resources to meet all students' needs. In addition, there was a common belief that work to implement a proficiency-based policy and a standards-based education system was improving collaboration and communication between educators in special education and regular education.

This findings section of the report will be thereby address the following guiding questions emergent in the empirical data:

- What are the common standards required for all students to earn a high school diploma?
- What is the required level of proficiency students must demonstrate to earn a high school diploma?

In addition, this section of the report will explore the following common concerns raised by participants:

- High school graduation rates may decline when proficiency-based diploma requirements are implemented.
- The number of due process cases brought against the school district may increase when students with disabilities are not able to earn a high school diploma under the proficiency-based policy.
- Schools and districts do not believe they have the resources and time to provide staffing and assistive technology that may be necessary to allow students with disabilities to demonstrate the required level of proficiency by age twenty.

Finally, the findings section of this report will also highlight the perceived benefit of a proficiency-based diploma system shared by many participants in this study:

- Professional collaboration and communication among regular education and special education teachers and leaders has improved as a necessity of implementing a standards-based education system.

Question: What are the common, required standards?

Maine educators, administrators, post-secondary professionals and employers have all raised questions about the standards identified in local school districts as required for a proficiency-based diploma system. Prior research has indicated that even when identical standards, such as CCSS, are adopted, they are often revised, adapted or changed in some way instead of being utilized verbatim and in full (Stump & Silvernail, 2015). This variation can lead to different skills or content (also referred to as "performance indicators") being aligned with different grade levels or courses in schools across the state.

Special education teachers and leaders in Maine identified multiple potential issues with this variation of standards among school districts. As noted in the literature review of this report, students with disabilities who are eligible for special education services develop an IEP or 504 plan with "reasonably calculated goals" in academic and/or behavioral standards. Many **schools have developed a standards-based sequence of courses or learning experiences** that outline a pathway for students to demonstrate proficiency in the required standards so as to progress to the next course level and ultimately graduate from high school. A student with disabilities' plan usually highlights goals and methods for progress based on this sequence and available pathways taking into consideration the student's special needs and abilities. Participants reported that this has been challenging in a proficiency-based system: "We're trying to figure out how to write the IEPs to meet the standards. **What are the standards for our students?** Is it 'reasonable' for some of our students to meet these grade-level content standards?" Another special education teacher noted, "If a kid is performing at grade level, they would not be in special education by definition. Our goal is to bring them up to be able to meet those grade level standards. But, for children five, six or seven years developmentally delayed that is just not going to happen by the time they are twenty [years old], especially in all eight content areas." A special education administrator stated, "If a child meets the goals that are set in the IEP, he/she needs a diploma.

We would be discriminating against a class of students if they were making progress towards their IEP's 'reasonably calculated goals' and couldn't earn a diploma before aging out."

Special education professionals indicated that there are situations in a proficiency-based diploma system that complicate the development of the IEP or 504 plan and create an uncertain future for students. A state leader in special education said,

> **Student mobility** is believed to be higher in the population of students eligible for special education services than the general population. There are also students [with disabilities] from multiple districts in out-of-district placements or special purpose private schools. Diplomas are awarded by the sending district. If there are multiple districts with different standards, how do they develop a common curriculum for their students and also ensure they can earn a diploma?

This situation was raised as a concern by special education professionals who said creating plans for students with disabilities was challenging due to variation in available pathways, content standards and graduation requirements when there was school choice at the high school level and among transient students. One special education teacher said, "I have a student [with an IEP] who just moved into my district his senior year. What if our district standards are different than what he has been doing?"

Special purpose private schools (SPPS) are required to transition to a proficiency-based system as well and report their progress in implementation to the MDOE (see Appendix E - *SPPS Plan of Instruction*) as well as develop an agreed-upon plan for proficiency-based curriculum utilization and reporting proficiency with the sending school district (see Appendix F - SPPS/SAU Diploma Agreement). A special education professional said,

> SPPS have usually adopted student expectations or standards from the district where the facility is located, but they may now have to implement different standards for each and every sending district. The intent is for the student to transition back to the sending high school, since SPPS is supposed to be a temporary placement. Now they'll need to align to multiple systems.

A representative of SPPSs indicated, "SPPS have even less capacity than public schools to handle the proficiency system, even if they develop their own single set of standards. They have fewer administrators, curriculum coordinators and content teachers than a sending district. There

are usually just special education teachers on staff." Similar concerns were raised with regard to regional programs for students with exceptionalities or disabilities serving multiple districts.

Question: What is the required level of proficiency?

As noted in this report's literature review, there is no definition of proficiency or level of curricular achievement required in state or federal law or regulation. In the two proficiency-based diploma systems mandated by state law (Maine and Vermont), **high school graduation requirements are developed locally by the school administrative unit (district). In Maine, this has resulted in significant variation among districts across the state.** Not only can the exact wording of standards vary, as discussed in the previous subsection, the necessary level of skill or amount of content a student must demonstrate or traditional grade equivalent to "proficient" also varies by district (Stump & Silvernail, 2015).

Therefore, special education professionals raised concern about these variations when sending students to out-of-district placements. One special education director said, "Outside programs used to be the ones to award grades or report achievement, and we would just translate that to our district transcript. Now, that may be too much work for SPPS with multiple sending districts. Now, they can just send us the student's work, and we will have to assess it. We don't have the resources for that at this point." A special education teacher said, "What if two kids get the same grade from their program but it is translated into two district systems differently. One kid graduates, the other doesn't. That isn't right."

Again, similar to issues with aligning standards to plans and pathways for students with disabilities, definitions of proficiency have critical impact on students enrolled in special education programming. A special education administrator said, "We cannot ignore the IEP changes that may be necessary; it's the law. What is required in an IEP does not necessarily match up easily with this new system. That's a real strain on our resources in terms of the time-intensive nature of writing and reviewing IEPs." A special education teacher described the concerns and benefits she perceived:

> We have started tying a lot of our IEP goals to the Common Core, really pushing kids to reach grade level, really harder than we'd pushed kids to make gains before. I think that's been a positive. On the other hand, it's hurting our kids, too. We have kids who can't meet those standards, who developmentally cannot keep up. So, even if they keep on track

> with their attainable goals, they will never earn a diploma. It's hard to tell that to a family in middle school.

Many districts have adopted content area graduation standards closely aligned with the CCSS high school standards in mathematics and English language arts. One district's graduation requirements in mathematics indicate, "Students must demonstrate the fundamental competencies required of Algebra II." An educator in that district shared, "It's caused some anxiety because we have a small group of students who cognitively probably are not going to meet the levels of minimum graduation requirements. They may not be able to perform complex abstract thinking that is required for Algebra." Another teacher said, "It's about finding a balance. It's pushing them as high as they can go but not wanting to create a structure that penalizes them." A superintendent said, "This will affect our graduation rate and completion rate. I am very concerned about our students not graduating with diplomas, very concerned."

Some districts are addressing this concern by developing a proficiency-based system built on the foundation of classroom-based assessments. A teacher explained,

> Graduation requirements [of this high school] for the class of 2020 require students to earn a grade of proficient or above on core assignments. These are assessed by teachers and aligned to the standards relevant to the course. If a student is not in an Algebra course, they will not be assessed on Algebra standards. As long as they meet proficiency in their assessments in their math classes, our policy doesn't require them to take certain classes.

Other participants from that district confirmed that **the level of standards in mathematics that a student encountered would vary depending on the pathway of courses** in which he/she enrolled. An administrator said, "Yes, it's possible that they meet the graduation requirements and never take an Algebra I course."

Other districts are establishing graduation standards for students with disabilities within the child's IEP. A special education administrator said, "We still have local control...we are protecting the [federally-mandated] IEP process." One district's policy allows a student's IEP team to establish alternative standards within the *Maine Learning Results* or different levels of proficiency in the district-mandated graduation standards. An administrator in the district said,

> They still have to meet the standards and progress required in their IEP. This is not a get out of jail free card. They must meet the IEP and transition plan goals. Those are not

> going away, just being individualized. We will still have kids who will not graduate because they don't engage or they drop out or don't do the work...Our policy designates staff and has K-12 and professional experts who understand the landscape, can designate funds to be sure the policy is used well, not abused.

If the team determines that the child could not reasonably meet the district's graduation standards even with accommodations, modifications and multiple pathways or opportunities before age twenty, the child will be awarded a diploma if he/she meets the alternative standards or proficiency levels established in the IEP.

(See Appendix G: Sample Proficiency-based High School Graduation Requirements for a sample of two Maine high school graduation requirements district-level policies.)

Concern: Lower High School Graduation Rates

District leaders and school administrators in this study shared a concern regarding adopting local high school graduation requirements that would lower their graduation rates. A school administrator said, "If we don't get this to be a well-oiled machine, then kids who know they can't graduate because of a disability won't want to stay in school." A teacher shared, "There are some students in [special education programming] who are just not capable of getting to that point since they are intellectually limited. They learn enough tools in our system to get a job or learn a trade but may not meet all standards in all content areas. A diploma for them has a different meaning...and now they will not get that." Another administrator said, "There are some students who are ten years behind the graduation standards. They are not going to get there."

Again, variation of high school graduation requirements and definitions of proficiency were also a concern for participants in this study. One superintendent said, "I look around and see districts with less rigorous requirements**. We will have fewer students graduating, especially in the earlier years of implementation, because of our rigorous standards and policies**. Then, we will be graded in comparison to these districts with lower expectations. Our graduation rates will go down; their graduation rates will not." Another administrator said, "I am also concerned that the [Maine] Department of Education is not going to address the fact that our graduation rate will be lower because we are implementing a proficiency-based system. It will look like our school performance is getting lower."

Concern: Increasing Due Process Cases

As described in the literature review section of this report, the U.S. Constitution and IDEA establish rights to due process. Parents of students with disabilities have the right to due process if they believe their child is not receiving the appropriate special education services necessary to equitably access and benefit from the general curriculum. Although law does not guarantee a certain level achievement or quality of education for an individual, due process determinations must still be allowed. In other words, even if a case establishes that the school is not at fault, "lawsuits and due process will cost districts millions of dollars," according to a district administrator. Nationally, the average school and family costs of a due process hearing is approximately $60,000 (Mueller, 2009). One participant reported that legal counsel indicated that Maine's average cost to the local SAU of a due process hearing, win or lose, was approximately $10,000 in addition to the services of dedicated personnel for four to six full days.

Due process hearings are assigned by MDOE to an officer, not determined in court. Awards can be in the form of monetary reimbursement or services. For example, if a ruling established that a school did not provide enough services for a student to be prepared for post-secondary education, the school may be required to pay for the student's remedial college courses. In addition, educators believed that hearing officers "may rule on the emotion of a case, not just the legality." A district leader said, "It's hard for a hearing officer to give the family nothing when there is so much at stake."

Legal counsel for districts and district leaders in this study shared the belief that due process cases would increase if proficiency-based diploma systems resulted in students not earning a diploma. One superintendent said, "The roof is going to blow off, and the families will sue us if even a couple kids don't graduate." A teacher said, "There are legal implications if you can't make this standard. Did you fail to teach me, or did I fail to learn?" Another district leader noted, "Due process hearings against schools will see increase among students in special education and among non-disabled students who failed to meet the standards and are asking for compensatory education for special education services they did not receive."

Concern: Insufficient Resources

Numerous components of implementing Maine's proficiency-based diploma mandate require increased resources, according to participants of this study. This was true for all populations of students, but perceived as especially necessary for meeting the needs of students

eligible for special education services. **Strategies and accommodations needed for students with disabilities to meet the graduation requirements by age twenty were described by educators and administrators as being possible only with additional staffing, technologies, and other educational resources.**

One administrator said, "We are going to have to amp up inclusion, have an ed tech in the class, have a special education teacher available to get into the class at least once a week, expose kids to higher level classes. I'm not sure we have the resources to do all that." A teacher said, "We can make modifications with assistive technology instead of more teachers, but we don't have the money for that equipment." A special education administrator noted, "We may need to think differently about the existing resources across the district." A superintendent said, "Because of management issues, we don't have the capacity to hold the twenty percent of students in our high school that are not meeting proficiency. Now, they are getting a diploma and moving on. I'm not sure what we will do. Students with an IEP have the right to remain enrolled until age twenty, that will increase our enrollment undoubtedly and require more staff, classrooms and resources."

Although some participants called for greater support from state-sponsored programs and the MDOE, many **participants recognized the need for increased resources at the state level also**. A school administrator said, "The state should be setting the direction as well, but they are understaffed and underfunded."

Benefit: Increased Professional Collaboration

Implementing a proficiency-based diploma system for all students, with and without disabilities, requires aligning curricula and instruction with standards and goals. **Standards are common within most districts in Maine** even though they are not necessarily common across districts throughout the state. Therefore, communication between regular education teachers and special education teachers of students with disabilities in mainstream classes was perceived as essential to developing an appropriate plan for the student. A teacher indicated, "Being curious about students' strengths and how we can use the students' strengths to demonstrate proficiency comes with some skillful collaboration between general education folks to understand what our assessments are measuring." A high school administrator described, "We meet Monday mornings--all building administrators, social worker, nurse, special education teachers, content teachers and assessment specialist--to talk about kids that are bubbling up with issues of

attendance, behavior, teacher referrals, meeting standards. For example, we notice this kid is behind in meeting math standards and make recommendations about what to do." A teacher said, "We try to talk more about special education students with their special education teachers, but we need more time to dialogue. We now understand this need."

Many participants in this study also cited a **"heightened level of collaboration" between special education teachers and general education teachers** to develop standards-based curricula aligned with grade-appropriate standards, assessments and goals. One school administrator said, "General educators have reached across the chasm to special education because they know we've been doing this individualized goal setting and standards alignment for years." A special education teacher indicated, "We have been working on dissection of complexity and taxonomy to make reasonable goals and accessible curriculum. It has changed our conversation incredibly. Now regular education teachers want to know how we do it." There were challenges noted in this more interconnected system. One teacher said,

> Special education teachers are in a wait game. We cannot develop accommodations and modifications to a system that isn't developed yet. Regular education is building the curriculum and proficiency levels in collaboration with special education, so that's good. But we can't modify that system for individual students until we see how regular education plays out.

However, many participants believed it was "very positive" that special education and general education teachers were "joining forces" and "integrally linked" to better meet the needs of their students. One teacher said, "Better communication and collaboration will help all our students, those with an IEP and those in regular education."

Conclusions

A persistent theme among Maine's public educators and educational leaders participating in this study was the concern for students with disabilities who may have been able to meet traditional high school graduation requirements based on earning course credits through successful completion of classwork but would not be able to demonstrate high school level proficiency in all eight content area standards by age twenty under Maine's new diploma law. There was evident uncertainty about how districts could interpret Maine's state law and the distinctions between law, regulation and guidance. As educators looked to their colleagues in other public school districts in the state, variation between districts in implementation

approaches and local policies provided limited clarification. Even federal and state law offer vague guidance that can be, and has been, interpreted by multiple school and district leaders in multiple ways. This was especially true when considering proficiency-based high school graduation requirements for students with disabilities.

The following are summary conclusions to the guiding questions and concerns raised in the empirical data:

- *What are the common standards required for all students to earn a high school diploma?*

 Conclusion: Most districts in this study had developed or were working to develop a proficiency-based diploma system that created common expectations and language within the district's standards-based curriculum in the required eight content areas utilizing common national or state standards as available. However, variation of selected language, grade-level application and content within academic standards was evident within curriculum sequence and common assessments in Maine's public school districts.

- *What is the required level of proficiency students must demonstrate to earn a high school diploma?*

 Conclusion: Locally-developed high school graduation requirements determine the level of proficiency that students must demonstrate to earn a high school diploma. State law does not define proficiency; guidance from MDOE has urged districts to adopt "high school level" proficiency requirements. Significant variation of specificity, complexity and interpretation of proficiency-based graduation requirements was evident among Maine public school districts. Local graduation requirements reflected minimum standards ranging from eighth grade to twelfth grade level content and skills as well as vaguely worded standards that could be interpreted at a multitude of levels and explicit standards requiring specific high school level skill demonstration.

- *High school graduation rates may decline when proficiency-based diploma requirements are implemented.*

 Conclusion: Evidence from this research suggests that in school districts implementing more rigorous, specific proficiency-based high school graduation requirements applicable to all students, with or without disabilities, graduation rates may decline disproportionately in comparison to school districts with more general or less-rigorous local policies.

- *The number of due process cases brought against the school district may increase when*

students with disabilities are not able to earn a high school diploma under the proficiency-based policy.

Conclusion: Increased due process cases were predicted by many participants in this study. Since most local high school proficiency-based graduation policies apply to future graduating classes and there is no currently-implemented comparable law in other states or past history, further research would be necessary to surmise a conclusion about this concern.

- *Schools and districts do not have the resources and time to provide staffing and assistive technology that may be necessary to allow students with disabilities to demonstrate the required level of proficiency by age twenty.*

Conclusion: District leaders have already reported increased costs to provide additional services and supports to students who are not on target to demonstrate the required proficiencies in thirteen years of public schooling. Also, especially with regard to students with disabilities who are more than two or three years behind age-based grade level, participants have indicated their current system resources do not allow their schools to provide the necessary supports for all students demonstrate grade twelve proficiency levels by age twenty years old.

- *Professional collaboration and communication among regular education and special education teachers and leaders improves and increases as a necessity of implementing a standards-based education system.*

Conclusion: Educators and administrators from multiple schools and districts across the state reported increased collaboration between special education teachers and regular education teachers within their districts at various grade levels. SAU administrators indicated that increased funding, resources or opportunities were needed to continue to develop and sustain these opportunities for collective professional work.

Review of Literature (Part B - Career and Technical Education)

National Historical Context: Perceptions and Policies Involving CTE

Since early in the 20th century, vocational education has served the United States as dedicated workplace training for young citizens. In the early decades, this training focused more on job-specific skills versus academic knowledge. Beginning in the 1960s, vocational education started to be perceived as remediation and did historically serve mostly at-risk students or students with special needs (Thompson, 1973). Enrollment in vocational schools declined in the 1980s (Levesque et al., 2000), mirroring a 44% decline in the proportion of the U.S. workers employed in manufacturing to 16% (Feuer & Shavelson, 1996). Then, the 1990s saw a resurgence of research examining the newly identified "career and technical education" programming with positive outcomes for students with regard to workforce readiness and engagement in post-secondary education. The American Vocational Association renamed itself in 1998 to the Association for Career and Technical Education and called for increased academic education within career and technical education (CTE) programming that emphasized "education through work, about work and for work" (Stone, 2000). This change in approach was slowly implemented over time. The 1994 National Assessment of Vocational Education (NAVE) results indicated that academic and vocational education curricular integration was struggling with teacher resistance, limited professional time for curriculum revision and barriers related to high school graduation and college admissions requirements. Educators and leaders indicated that work-related experiences required additional student supports not within existing CTE programs (Pauly, Kopp & Himson, 1994) and expressed concern in the limited opportunities to place high school students in high quality out-of-school work training situations, especially in rural schools (Castellano, Stringfield & Stone, 2001). Additionally, employers complained that many CTE programs were using out-of-date technologies that were not adequately preparing students for the workplace (Kazis & Goldberger, 1995).

In 1990, the federal government supported the CTE revitalization through passage of the Carl D. Perkins Vocational and Applied Technical Education Act (Perkins Act). The Perkins Act provides funds to states targeting special populations and reform of CTE programming. The

focal points of eligibility include technical preparation for post-secondary training, work-related experience, vocational and academic skill acquisition as well as accountability measures connected to student outcomes. Although approximately one billion federal dollars are annually dedicated to eligible state plans, this equates less than five percent of local spending in most CTE schools in the nation (Silverberg et al., 2004). In FY 2015, Perkins grant expenditures were 3.8% of total CTE expenditures within all funds by all Maine CTE Regions and Centers (Maine Education Policy Research Institute, 2017).

The Perkins Act was re-authorized in 1998 and, most recently, 2006 to support secondary and post-secondary opportunities in CTE. The 2006 Perkins Act was revised to build a robust CTE experience and increase the academic foundation of its student population. Requirements of the state plan for application to federal dollars included components reflecting CTE and academic pathways in designated "programs of study" and a "Tech-Prep Consortia" directly connecting secondary schools to local post-secondary programs, as well as student-level accountability measures.

Other federal policies encouraged increased development and improvement in CTE programming as well. In 1994, the School to Work Opportunities Act was enacted by the federal government, providing funding for work-based educational opportunities to increase both college and career readiness. Research suggested these resources were connected with improved attendance and perceptions of schooling as well as increased development of related career training programming and work initiatives in secondary schools (Hughes, Bailey & Mechur, 2001). However, funding expired in 2001 and was not renewed. The American Recovery and Reinvestment Act of 2009 allows flexibility for funds dedicated to school to work programs, but does not mandate the use of funds for CTE-related purposes. The Workforce Investment Act of 1998, re-authorized in 2015 as the Workforce Innovation and Opportunity Act, also includes regulations and supports for Job Corps and professional training, but is not directly targeted exclusively to secondary education experiences.

National Recent Context: CTE Student Population & Policy Implementation

Since the 1990s, the pool of research involving secondary CTE populations and programming has increased, providing improved awareness of the challenges and achievements of CTE programs and their student populations. Implementation of measures required under the Perkins Act have instigated CTE programs to "revamp" the offerings to be more integrated with

academic course programs, resulting in many cases in higher GPA, test scores, graduation rates and college enrollment levels among CTE students in integrated programs compared to CTE students in separate pathways (Brand, 2008; Castellano, 2004; Stone & Aliaga, 2005). However, challenges shared by CTE educators and leaders in research during the 1990s were persistent in the more recent research as well. CTE educators cited difficulties with and barriers to implementing increased integration with academic programming, including a lack of content area knowledge among CTE teachers (Asunda, Finnell & Berry, 2014) combined with limited funding and compensated time for collaborative professional development as well as co-teaching of academic subject areas (Conderman & Hedan, 2014; Hanover Research, 2012). Employers continued to suggest that students from these programs lacked the fundamental literacy, mathematical and inquiry skills necessary in the increasingly diverse workplace (Meyer, 2008).

Student populations in CTE programs do continue to demonstrate predominantly lower prior achievement in core traditional academic assessments (Elliott, Foster & Franklin, 2005; Stone, 2003) as well as lower levels of enrollment in advanced courses (Jobs for the Future, 2005), but these results were usually reflective of academic experience prior to enrolling in CTE pathways. Comparing achievement of students enrolled in CTE programming to comparably lower performing peers who did not enroll in CTE, CTE students took more advanced mathematics courses (Stone, 2003), scored slightly higher on mathematics and science assessments (Castellano, 2004; Hernandez & Brendefur, 2003), and had lower dropout rates (Plank, deLuca & Estacion, 2005) than non-CTE students in a traditional academic pathway. As is often the situation, the limitations of these research conclusions include varied definitions and implementation levels within CTE programming.

National Context: CTE and Standards-based Education

Since the 2009 introduction of the Common Core State Standards (CCSS), many states have taken the opportunity to encourage greater collaboration and integration with CTE programs based on standards-aligned curricula in both CTE and academic pathways. However, Meeder and Suddreth (2012) indicated that over half of the states implementing CCSS have no direct alignment at the state level of CCSS to CTE programming. Challenges of this implementation were cited as lack of familiarity with content, divergent pedagogical approaches and local credit requirements for graduation (Sheehy, 2012). In addition, CTE educators often indicated that fundamental academic standards, such as mathematics and literacy, were pre-

requisites for their courses, not material taught in their curriculum (Polkinghorne, Hagler & Anderson, 2010). While CTE teachers said they were teaching some standards in science, mathematics, technology and engineering programs (Asunda, Finnell & Berry, 2014; Chase, 2010), curricula did not usually fully align with academic course requirements or graduation requirements to allow students to replace academic classes with CTE coursework. Certain industries have developed crosswalks or intersections outlining the alignment of the nationally-recognized CTE program of study curriculum tasks and national industry standards with national academic standards in ELA and mathematics (CCSS) and science (Next Generation Science Standards). {See Appendix H for National Automotive Technicians Education Foundation (NATEF) automotive technology curriculum crosswalk documents.}

The 2006 Perkins Act requires reporting on secondary student indicators, such as "career and technical skill proficiencies, including student achievement on technical assessments, that are aligned with industry-recognized standards, if applicable and appropriate" (§113(v)(2)(A)). While this was found to lead to greater collaboration among post-secondary workforce program professionals and secondary CTE educators (Imperatore & Hyslop, 2016), CTE educators and leaders expressed concerns about this measure. Administrators indicated that the technical assessments usually have expensive fees, many tests require the applicant to be at least 18-years-old and assessments are often not aligned to local employers' eligibility or local high school graduation requirements (Bae, Gray & Yeager, 2007).

Maine Context: Secondary CTE Programs and Student Population

Maine currently has twenty-seven secondary Career and Technical Education centers (n = 19) and regions (n = 8) serving approximately 8,000 secondary students (Fiscal Year 2015). Slightly more than one-third of these students (n = 2,982) are female. Almost half of these students (n = 3,943) are identified as economically disadvantaged. A little more than one quarter of these students (n = 2,093) are eligible for special education services. In addition, thirty-five students are enrolled in CTE programs at the state's two juvenile correctional facilities. Maine's CTEs include programs in ten career clusters that include twenty-three career pathways connected to in-state post-secondary educational or training opportunities. CTE expenditures totaled approximately $49.0 million in FY2015, including $1.9 million in Perkins grant funds. The MDOE reports that the high school graduation rate for students in Maine concentrating in

CTE programs was 90.2 percent and the total student population graduation rate in Maine for academic year 2015 was 87.5 percent.

Other vocational education and training programs for secondary students in the state include the Maine Pre-apprenticeship Program aligned with the Maine Department of Labor's Apprenticeship Program for adults 18-years of age or older (a high school diploma is not required). These apprenticeship training pathways offer on-the-job learning combined with classroom training for one to five years. Registered apprenticeships offered to adults can be connected to secondary CTE programming, as evidenced by model programs in Kentucky (Kentucky Labor Cabinet, 2013), Colorado (Rusch, 2016), as well as Switzerland and Germany (Backes-Gellner, 2014). Multiple private pre-professional educational programs also offer vocational training opportunities for Maine secondary students during the summer or academic year: Portland Ballet's Pre-professional Performing Arts High School "CORPS" Program, Bossov Ballet Theatre at Maine Central Institute, Maine College of Art Pre-college Program, as well as post-secondary credit-bearing experiences available across the state with offerings in various areas of study and other pre-professional programs.

Maine Context: Proficiency-based Diploma Policy and CTE

For decades, vocational and career/technical education has been rooted in demonstration of skills assessed with certified industry standards. Approval of curricula for Maine CTE programs of study is based on national-certified or state-certified industry standards often providing students with opportunities to obtain certifications and safety trainings relevant in these vocational areas of study. For example, the Agriculture and Natural Resources Career Cluster standards are based on the United States' National Council for Agricultural Education content standards from 2009 with approved programs of study for this Career Cluster available in eleven of Maine's CTE schools.

The MDOE has held CTE Intersections Workshops since 2015 to provide opportunity and training for CTE, ELA and mathematics instructors to engage in collaborative work to align national industry standards and CTE curricula standards with state academic standards. This work is ongoing, but drafts of standards and curricula intersection are available for eleven of the twenty-three CTE career pathways at the MDOE website http://www.maine.gov/doe/cte/professional/index.html, and an example of draft work completed

to date can be seen in Appendix I, reflecting American Culinary Federation (ACF) and CCSS mathematics standards.

State policy mandating implementation of proficiency-based diploma systems in Maine's public diploma-granting secondary school systems was established in 2012 with the passage of *An Act to Prepare Maine People for the Future Economy* (S.P.439 - L.D.1422) and further amended in 2015 with *An Act to Implement Certain Recommendations of the Maine Proficiency Education Council* (S.P. 660 - L.D. 1627). Both statutes referenced student enrollment in career and technical education programs. The most recent amendments (S.P. 660 - L.D. 1627) are to be implemented when Title 20-A (3) (207-A) (3) (§4722) is set to be repealed in 2020 and require routine technical rules to be adopted by the commissioner. These rules must "allow the commissioner to identify the manner in which the opportunities for learning in multiple pathways of career and technical education programs may be used to satisfy certain components of the system of learning results established under section 6209" (§4722-A (7)(B)) and "address the appropriate placement of students in career and technical education programs while ensuring that all students be exposed to all the content areas of the system of learning results established under section 6209 through the 10th year of their studies" (§4722-A (7)(C)).

In addition, this most recent proficiency-based diploma legislation (S.P. 660 - L.D. 1627) indicates that secondary schools may award a diploma to students who meet the requirements in five exceptions. One of these exceptions relates to students in CTE programs:

> B-2. ...a student who has satisfactorily completed a state-approved career and technical program of study and either met 3rd-party-verified national or state industry standards set forth in department rules established pursuant to section 8306-B or earned 6 credits in a dual enrollment career and technical education program formed pursuant to chapter 229 from a regionally accredited institution of higher education and who has successfully demonstrated proficiency in meeting state standards in the content areas and guiding principles...is eligible to receive a high school diploma from the secondary school the student last attended...with the phase-in of the following diploma requirements for the graduating class of 2020-2021 to the graduating class of 2023-2024:
>
> (1) For a student graduating in the graduating class of 2020-2021, the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics and social studies;

(2) For a student graduating in the graduating class of 2021-2022, the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics, social studies and at least one additional content area of the student's choosing;

(3) For a student graduating in the graduating class of 2022-2023, the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics, social studies and at least 2 additional content areas of the student's choosing; and

(4) For a student graduating in the graduating class of 2023-2024 and in each subsequent graduating class, the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics, social studies and at least 3 additional content areas of the student's choosing. (Sec. 2. 20-A MRSA §4722-A (3)(B-2)).

This exception thereby indicates that students may be awarded a high school diploma if they earn specified credentialing in career and technical education programming and standards/credits in addition to state content area standards in ELA, mathematics and social studies as well as the guiding principles in the first year (2020-2021) of the phase-in. Then, students must demonstrate proficiency in one, two and three additional content areas of their choice during the next three years of phase-in culminating in academic year 2023-2024.

This exception includes four key variations from the requirements described for awarding a diploma in subsection 1 of this statute.

1. First, to be eligible for this exception, students must complete a CTE program of study and (a) meet industry standards, or (b) earn six dual enrollment CTE credits.
2. The general diploma requirements of subsection 1 articulate four core, non-optional content area in which students must demonstrate proficiency including "Science and technology." Requirements in this exception omit "Science and technology" and include ELA, mathematics and social studies.
3. This exception does not include a fourth year of phase-in requiring students to demonstrate proficiency "in all content areas." Therefore, students with the appropriate CTE credentials may be awarded a diploma if they demonstrate proficiency in three core content areas (ELA, mathematics and social studies) in addition to three of the five

phased-in content areas of the student's choice: Career and educational development; World languages; Health, physical education and wellness; Fine arts; or Science and technology.

In other words, under current policy, students of the graduating classes of 2024 and beyond may be awarded a high school diploma if they earn the specified CTE credentials and demonstrate proficiency in 6 of the 8 content area standards (including ELA, mathematics and social studies as well as three content areas of the student's choice). The following document in Figure 1 below is a document provided by the MDOE that articulates these requirements.

Figure 1. *Maine Proficiency Diploma Requirements Beginning 2020-2021* (MDOE, 2017)

Maine Proficiency Diploma Requirements Beginning 2020-2021

Year	Proficiency-based Diploma Requirements: CTE Pathway *see also 20-A MRSA §4722-A (1)(E)		Proficiency-Based Diploma Requirements *see also 20-A MRSA §4722-A (1)(E)	
2020-2021	3 Content Areas and CTE and GP	Content Areas: ELA, math, SS and CTE and GP	4 Content Areas and GP	Content Areas: ELA, math, S/T, SS and GP
2021-2022	4 Content Areas and CTE and GP	Content Areas: ELA, math, SS and at least one additional content area of the student's choice(CED; WL; HE, PE and wellness; VPA) and CTE and GP	5 Content Areas and GP	Content Areas: ELA, math, S/T, SS and at least one additional content area of the student's choice (CED; WL; HE, PE and wellness; VPA) and GP
2022-2023	5 Content Areas and CTE and GP	Content Areas: ELA, math, SS and at least two additional content areas of the student's choice(CED; WL; HE, PE and wellness; VPA) and CTE and GP	6 Content Areas and GP	Content Areas: ELA, math, S/T, SS and at least two additional content areas of the student's choice (CED; WL; HE, PE and wellness; VPA) and GP
2023-2024	6 Content Areas and CTE and GP	ELA, math, SS and at least three additional content areas of the student's choice (CED; WL; HE, PE and wellness; VPA) and CTE and GP	7 Content Areas and GP	Content Areas: ELA, math, S/T, SS and at least three additional content areas of the student's choice (CED; WL; HE, PE and wellness; VPA) and GP
2024-2025	6 Content Areas and CTE and GP, same as 2023-2024	ELA, math, SS and at least three additional content areas of the student's choice (CED; WL; HE, PE and wellness; VPA) and CTE and GP	8 Content Areas and GP	Content Areas: ELA, math, S/T, SS and at least four additional content areas of the student's choice (CED; WL; HE, PE and wellness; VPA) and GP

4. Finally, this exception for students with CTE credentials does not include the requirements identified in subsection 1, part E: "Certify that the student has engaged in educational experiences relating to English language arts, mathematics and science and technology in each year of the student's secondary schooling" (Title 20-A Section 2.

MRSA §4722-A (1)(E)). The intent of this omission is ambiguous. Legal experts indicated that the introductory language of the exceptions (MRSA §4722-A (3)), "Notwithstanding subsection 1," would suggest that each exception would replace all parts, A-E, of subsection 1. However, state level guidance documentation (Figure 1) suggests that subsection (1)(E) is intended to remain a requirement for students with CTE credentials.

It should be noted that there are other existing state laws mandating components of public education offerings that were not replaced or amended by LD 1422 or LD 1627. For example, "the commissioner shall undertake initiatives to implement effective, comprehensive family life education services" as bound by Title 22, Chapter 406 definition:

> "Comprehensive family life education" ...education in kindergarten to grade 12 regarding human development and sexuality, including education on family planning and sexually transmitted diseases, that is medically accurate and age appropriate; that respects community values and encourages parental communication; that develops skills in communication, decision making and conflict resolution; that contributes to healthy relationships; that promotes responsible sexual behavior with an emphasis on abstinence; that addresses the use of contraception; that promotes individual responsibility and involvement regarding sexuality; and that teaches skills for responsible decision making regarding sexuality.

In this way, public school systems must still offer these educational experiences, such as "family life education," within their programming for all students. However, credit-based policy requiring students to earn a specified number of credits including a specified number of credits in designated content areas is no longer required in state law. In current state statute, credit-based requirements have been replaced by proficiency-based requirements for awarding a high school diploma upon demonstration of meeting state standards. SAUs may develop local high school graduation requirements that maintain credit-based or time-based requirements or adhere only to the proficiency demonstration requirements of the most current statute. Therefore, local graduation policies may incorporate the CTE exception in state policy in a way that may not require students to engage in specific "educational experiences" and may not require students to demonstrate proficiency in health (including family life education) and physical education, or science, or visual and performing arts, or world languages.

Implementation of exceptions in the proficiency-based diploma statute are not mandatory: "Notwithstanding subsection 1, a student ***may*** be awarded a diploma indicating graduation from a secondary school in the following circumstances." SAUs, as the institution authorized by the state to award high school diplomas, may choose to implement exceptions or to develop local high school graduation requirements that do not provide these exceptions. Similarly, SAUs may maintain additional local requirements, such as traditional credit-based expectations or a mandatory, time-based course of studies in addition to proficiency-based graduation requirements.

Approaches and interpretation to implementing practices incorporating this proficiency-based diploma law within Maine's SAUs and CTEs are reflected within the empirical data collected for this study. This data as well as the perceptions and insights of Maine CTE instructors, administrators and professionals regarding the impacts of this proficiency-based high school diploma law on career and technical education is shared below in the Findings section of this report.

Methodology (Part B - Career and Technical Education)

The fifth phase of this ongoing research includes a series of studies examining the impacts of implementing proficiency-based diploma systems within the immediate and wider contexts of public schooling in Maine. This report includes research exploring implications of proficiency-based diploma policy within the contexts PK-12 special education and career technical education programming and student populations, with a focus on the high school level. Part B of this report shares information from investigation of the implications of Maine's proficiency-based high school diploma policy as it relates to career and technical education as well as pre-professional educational opportunities available to secondary students and was guided by the following research questions:

- How does Maine's proficiency-based high school graduation state policy impact opportunities for Maine secondary students to engage in learning experiences at Career and Technical Education schools as well as pre-professional educational programming?
- How do career and technical education instructors and leaders in Maine public schools perceive the facilitators and challenges in implementing Maine's proficiency-based high

school diploma law?

Sample

During the winter of 2016-2017, MEPRI researchers from the University of Southern Maine conducted document review and gathered information from interviews with instructors and administrators from CTE schools and pre-professional programs in Maine. In order to explore how Maine's proficiency-based high school graduation policies and standards-based education systems were impacting career and technical education programming and student populations, a sample of eight CTEs were recruited. Administrators from seven CTEs agreed to participate, but due to weather-related school closures interviews were only able to be scheduled in five sites in the timeframe required for completing this study. In each CTE, individual or focus group interviews were conducted with administrators and educators, involving a total of twenty-four individuals participating in the seven interviews at five Maine CTE schools. In addition, four administrators involved in pre-professional education representing private organizations or state agencies were also interviewed.

Data Collection & Analysis

A literature review of national research was conducted to identify trends, focal points and federal policies concerning career, technical and vocational training with relation to proficiency-based education implementation methods and graduation policies. In addition, literature was examined that explored the approaches of other states working with proficiency-based, standards-based, competency-based or mastery-based education to identify policies and strategies related to career and technical education. Following the exploration of the national research and literature, interview protocols (see Appendix J) were developed to address the following topics:

- Perceptions of the proficiency-based high school diploma system policy in Maine as relates to career and technical education within Maine's public centers and regional schools.
- Perceived facilitators and challenges in implementation of Maine's proficiency-based diploma system policy as it relates to programming, scheduling and alignment between CTE centers or regional schools and their sending districts.

Interviews were conducted in-person with individuals representing five public CTE centers or regional schools.

Researcher notes were compiled and analyzed to identify emergent themes in the empirical data collected and reviewed as well as patterns highlighted in national literature. The MEPRI research team established key areas of focus as well as significant findings that were unique or divergent. These findings regarding implications of proficiency-based diploma policy within the contexts of career and technical education are discussed in this report in the section below.

Findings (Part B - Career and Technical Education)

Early Stages of Implementation & Awareness

Participants in this empirical study included educators and administrators from select Maine career and technical education (CTE) centers and regional schools as well as school administrative unit (SAU or district) superintendents and pre-professional education program administrators. Examination of data from interviews and documents revealed that most CTE or pre-professional schools in this study were in the early stages of incorporating elements of Maine's proficiency-based high school diploma statute (S.P. 660 - L.D. 1627) and beginning to realize the impacts of the law. Implementation is mandated within public SAUs authorized to award high school diplomas no later than the academic year of 2020-2021. It should be noted that only SAUs can award diplomas; CTE other pre-professional programs do not have authority to award high school diplomas.

The proficiency-based diploma law in Maine requiring students to demonstrate proficiency in eight content areas allows SAUs to define proficiency and establish a local system in which student must be offered "multiple pathways" and "multiple opportunities" to meet the graduation requirements of their school district. In this way, SAUs may determine *how* a student demonstrates proficiency in the required standards. Among case study school districts involved in this study and previous MEPRI research relating to proficiency-based education, districts across the state have engaged in various approaches to implementing the state law as well as various definitions of proficiency in the content areas. The current law requires these proficiency-based high school diploma requirements to begin with the graduating class of 2021 and phasing in implementation through 2025. Therefore, **not all districts have formally**

adopted local proficiency-based graduation requirements yet, although some do have policies in place for the graduating class of 2018.

As noted in this report's literature review, Maine has had a decades-long history of standards-based education in the academic content areas and CTE areas of study have had curricula and assessments based on national industry standards for decades as well. Therefore, the pedagogical concept of standards-based or competency-based education was very familiar to all participants in this study from public institutions. In fact, some CTEs had articulated crosswalk documents that demonstrated **alignment between national industry standards in certain career pathways and academic standards** (Common Core Math & ELA and Next Generation Science). In addition, several CTE and pre-professional programs had developed documentation of Maine state standards as they aligned to their program curricula. This work was also being supported at the state level, including the MDOE's CTE Intersection Workshops since 2015.

However, there was a great variance across study participants in terms of the level of awareness of specifics within the most recent Maine legislation regarding proficiency-based diploma requirements. Most administrators and instructors in CTEs were aware of the 2012 legislation and that amendments had been made this past session. Some CTE directors were very clear in their interpretation of the most recent statute passed in the 127th legislative session (S.P. 660 - L.D. 1627) and the components of the law relating directly to CTE students, but others were less familiar with this current law. Most CTE instructors were not very familiar with the most recent legislation. As one interviewee said, "It's in the law. I guess I know that now, but only one [of five] of us in this group knew that before this interview." Educators were keenly aware of work being done in both sending high schools and CTE or pre-professional schools to implement a standards-based system, but since many CTEs enrolled students from numerous sending districts that varied in their local proficiency-based graduation requirements, there was less understanding of what each individual student needed to graduate or how that applied to students enrolled in CTE programs.

Sending District as Diploma-awarding Institution

CTEs are not authorized by the State of Maine to award high school diplomas. SAUs are authorized to award high school diplomas. Therefore, students enroll in a traditional high school in their sending district then arrange to enroll in CTE programming at a

cooperating CTE center or regional school or engage in other, private pre-professional programs. The agreements between sending district high schools and CTE schools or pre-professional program may vary in terms of courses of study available for enrollment, transportation provisions, scheduling, grade reporting methods, documented standards aligned with assessments and educators' professional development opportunities.

There are some CTE programs that are entirely integrated within one local high school, sharing a physical plant, schedule, administrators, professional development and grading methods. One administrator said, "We've done a lot of district professional development around the idea of formative and summative assessments. So, the professional development for CTE instructors looks exactly the same as for academic teachers." Another CTE director shared, "[Shared professional development] can be a blessing and a curse, because sometimes the CTE instructors need more concrete examples of how that would work in a CTE classroom. Typically, that is not how the professional development is designed. It's usually designed more for the traditional classroom." In these closely coordinated CTEs and high schools, grading systems may also be shared. A CTE instructor indicated, "We've been told we have to do the same proficiency-based grading system as the academic teachers. So, we shifted back from a 1-4 scale to a 50-100 and letter grading scale adopted at the high school." Again, there were reported benefits of easier translation of grade reports and speaking the same language when discussing student progress but also challenges to fit one grading method to all types of programming.

Other **CTEs enroll students from multiple sending districts (up to 22 different sending high schools) that do not allow for coordination between sending and receiving schools**. A CTE instructor said, "There's no common professional collaboration in my world. We don't really have a way, short of us going...to another school and arranging a meeting with someone, there's no intersection of local teachers here." Some professional associations have worked to negotiate additional time for collaborative professional development into their contract, but most participants in this study indicated that those efforts had not been successful yet. One educator said, "There's nothing in the contract that prevents collaboration...but there's nothing in the contract that encourages or compensates people to collaborate either...If we want to go down and talk to a teacher at [a sending high school], that's on our back, on their back. That is not paid for."

The challenges of working with multiple sending districts extends to awarding credit for certain programming or courses as well. A graphic design CTE educator said,

> I have some students from some schools who get my class as a fine arts elective. Other schools won't give it because they're defending their own film-making classes. Sometimes it's just by negotiating with a guidance counselor. Sometimes it's by emailing certain teachers or administrators. Sometimes it's by the kid, if they need a credit to graduate or something.

Still, other CTEs enroll students predominantly from one sending district with whom they coordinate some professional development opportunities, curriculum mapping and grading methods but also enroll a smaller number of students from other sending districts that are not coordinating with the CTE and may even include private high schools that do not fall under the jurisdiction of state public education mandates.

Participants expressed common challenges regarding alignment between the multiple schools and various systems. One educator explained, "We run trimesters while some sending schools run semesters. It doesn't matter. We just report our grades to the sending school the way we grade them, and then they adapt it to their system...How do they adapt it? I have no idea." Another instructor said, "I'm not sure what they do. Our grades are standards-based for sure, but they're based in industry standards not the Common Core. So, somebody's going to have to apply the Common Core to what I give them." A CTE administrator explained, "We simply send them copies of every student's report card as a PDF. We don't have the same management system. Then, the high school unfortunately has to manually input all that data into their own system."

Many **CTE directors were working deliberately to build relationships and agreements with sending high schools to develop more professional collaboration and seamless experiences for students.** One administrator described,

> All high schools' principals are coming to the table, and I'm going to show them a crosswalk of all their high school graduation standards. I've taken every single sending school's graduation requirement standards and compared them to see overlaps and where we are different and which can be demonstrated in CTE programming...In conversations with other CTE directors, they think I'm nuts...But I think it's going to open doors for more kids to access us.

Other CTEs were engaged in collective work to align standards across both systems. One CTE instructor shared, "We've been asked to look at our curriculum maps and apply standards...so that we can share it with high schools, and they can say students would meet certain standards from things in our classes." However, another CTE Director also expressed frustration, "The thing is, all of this can be done, and yet it's still your local high school that's going to say yes or no to awarding credit."

Administrators from independent pre-professional programs indicated that many of their educational offerings had also been aligned to standards in the Maine Learning Results in related content areas as well as national standards or internationally recognized curricula. They often worked with students to "find what we do here and how it applies to the graduation standards at their high school." However, some programs reported seeing a decline in enrollment since proficiency-based replaced credit-based graduation requirements from some high schools because agreements would only document a few standards in one content area or students said they had increased course loads to demonstrate proficiency in other content areas at their high school demanding more time in their school day.

Aligning Academic - CTE Standards

As previously mentioned in this report, the 2006 Perkins Act requires reporting "career and technical skill proficiencies, including student achievement on technical assessments, that are aligned with industry-recognized standards, if applicable and appropriate" (§113(v)(2)(A)). The Perkins Act was revised to increase the academic foundation of the CTE student population. Participants in this study suggested that there had been a specific increase in efforts to integrate CTE and academics in secondary schools. As also stated earlier in this report, this work is also being done at the state level with various CTE, ELA and mathematics educators during the MDOE's CTE Intersection Workshops. One CTE instructor described this workshop experience as follows:

> CTE instructors got together with academic people and looked at course content. I was there for one of the two days. They gave us literacy standards, and we had our NATEF [The National Automotive Technicians Education Foundation] standards. We would try to crosswalk or intersection, or whatever you call it to match the standards up. It was teachers from all over the state. There was a lot of confusion, I can tell you that. I found it

was a real far stretch to try and link an automotive standard to a literacy standard. I don't think the learning that they're doing in my class should happen in an English class setting.

Another CTE instructor added, "Yeah we were trying to meet math standards to the criminal justice programs, and we basically concluded that there was nothing...I mean [students] do a lot of report writing and research, but they need to have those standards met before they get to us. I'm not an English teacher." However, CTE educators also said that **academic teachers seemed to gain important understanding of CTE programs**:

> It's been eye-opening. The academic teachers were shocked by how much math was in the machine programs...They didn't know we had standards-based, researched and nationally recognized curriculum that had to be followed, third-party assessments with a state level CTE assessment committee and curriculum committee and a review process for each program.

Full alignment between CTE program curricula and an academic content area was often not able to be found since "it doesn't comprehensively address all of the academic standards at the high school level." But, a greater awareness and appreciation for CTE programs was cited as a benefit of collaborative work with academic and CTE educators.

CTE instructors and administrators shared other challenges with regard to the concept of expecting students to demonstrate proficiency in industry standards. Although most CTE program curricula was aligned to nationally-recognized standards often endorsed by industry organizations, these standards were for adult professionals and often had to be adapted to the high school level coursework. A CTE instructor in building construction said, "The word proficiency is one that bothers me more than anything because very rarely do you see a 17-year-old, 18-year-old or even 19-year-old that is proficient in the sense of being a professional in the work force at entry level." Another CTE educator affirmed this: "**Our standards, our proficiency goals are industry standards. Those are standards that we apply to individuals who have been in the workforce anywhere from three to ten years. A student could earn an A in my class while only demonstrating partial proficiency in the industry standard**." A computer technology instructor said, "My CompTIA A+ certification exam is geared towards individuals who have 3-5 years of experience in the field. I can't base credit for my class based on proficiency or passing that exam for all kids." While CTE instructors said they did not want to lower the goal or understanding of the professional industry requirements, there was a common

belief that high school course credit or earning a high school diploma should not be dependent upon the industry definition of proficient intended for experienced, adult professionals.

Similarly, the assessments for these **professional certifications sometimes had exam fees or required exam applicants to be a minimum age of 18-years-old with 900 hours of workplace experiences**. A CTE instructor said, "Certain OSHA safety regulations and child labor laws prevent us from training students on some equipment or being able to accumulate the hours of workplace experience needed to even apply for certification." This workplace experience was often not available to high school students. The Maine Department of Labor's Maine Apprenticeship Program was working to develop opportunities for students as a "crosswalk between what school is teaching and what the apprenticeship wants" and aligning to CTE curricula of designated career pathways. The goal of this work was to build a registered apprenticeship available to students with structured curriculum including classwork and workplace experience. However, currently this program is only accessible to adults. Resources were cited as a limiting factor. There is currently only one person at the MDOL dedicated to this work. It was stated that "having a person who has the time to establish meaningful connections, connect to local district standards, make connection between CTE business advisory committees and apprenticeship" would be critical to establishing a successful program for high school students.

Although CTE educators philosophically believed in "multiple pathways" or "multiple opportunities" to demonstrate proficiency for their high school classroom, challenges to aligning these pedagogical approaches required within the state statute with workplace readiness were described by participants in this study. Industry exams were usually in the format of multiple-choice tests, and it was reported that local professionals didn't share the belief that allowing many opportunities to complete work was preparing students for the workforce. A CTE Director said, "We are looking at individual learners and figuring out how can they best express their proficiency. But again, that is a balancing act because some of the third-party assessments are multiple choice. So, you have to keep exposing them to those kinds of tests or we're not getting them ready for industry requirements." In this way, some high schools' implementation of more flexible late work policies or habits of work were not seen as applicable to workplace readiness efforts in the CTE schools. A CTE instructor said, "We have a school policy that make up work has to be done in a certain period of time or it's off the table. There's no chance to go back the

last two weeks of the semester and try to make it up like the high school. That's how it is on the job...we're trying to model employability skills here." **To prepare students for this reality of the profession, instructors felt pressure to practice these more traditional methods of assessment with their students**. Some participants were "really struggling with implementing some aspects because they feel they're not getting them ready for the workplace." Participants expressed that "some business owners come for our program advisory and say, 'Whoa, kids are allowed to re-do what? How many times are they allowed to re-do?'...They suggest we are reinforcing bad attitudes and students' laziness because we're letting them redo, redo, redo."

Another technical challenge to providing CTE students in all programs the opportunity to meet industry standards towards earning a diploma was acquiring up-to-date equipment. Some industry certifications are performance-based assessments on certain machines or using specific tools. **Staying current with industry equipment can be difficult in some fields.** A forestry/logging instructor said, "The industry is changing...the equipment has changed so much there is no way our school can afford the new equipment." A CTE Director said, "There's so much new equipment we need to be relevant in this job market. We just don't have the resources to buy these new machines to train our kids on them." A CTE administrator explained, "That's where we're finding that there are certain programs that cannot meet certain aspects of certain standards. The equipment is cost-prohibitive. [Nuclear instrument module] (NIM) standard, for example, within the machine tool program is beyond our resources here."

There was substantial variation among the industry standards or professional certifications of the career pathways available to students in Maine CTE programs. As noted, some industries were "ahead of the game" with national standards that had been aligned to CCSS and/or Next Generation Science Standards or were being connected to Maine state standards. However, other career pathways did not offer these opportunities for students to meet "3rd-party-verified national or state industry standards" as put forth in the state statute. For example, a Criminal Justice instructor indicated, "I don't have industry standards like a lot of these programs do. You can't be certified in anything in criminal justice until you are actually a law enforcement officer...We take the standards from that professional and community college curriculum, but we only use about 15-20 percent of it." In this way, high school students in the Criminal Justice career pathway would not be provided the opportunity to meet industry standards or earn dual enrollment credit required in the statute for the CTE exception.

Academic Proficiency as Prerequisite to CTE

Many CTE instructors expressed the belief that some of the fundamental academic standards in high school level CCSS mathematics and ELA were not taught in their classes and actually were prerequisite knowledge to the application of content in their courses. Several CTE instructors and administrators shared concern that students enrolled in their programs did not have necessary literacy and mathematic skills to engage in the content of the course. One instructor said, "We get some students who are in 11th grade, and they still can't write and they don't know how to spell." A Plumbing instructor indicated, "I end up remediating quite a bit of math." Another CTE instructor said,

> Teaching that basic math and English skills is not my specialty, not what I'm trained to do. Showing them how to apply it is. So I expect them to know what fractions and ratios are when they come to us as sophomores or juniors. There are a lot of students coming in now that don't have that in their basket of knowledge, and it slows down some of the rest of the class...It frustrates me, but I simply do not have the time to try to teach these kids English or basic math. It's all I can do to keep the program running for the majority of the students.

Many participants in this study agreed that their coursework allowed students to demonstrate proficiency in certain academic content area standards, but they did not necessarily teach the fundamentals of that skill in their classes. An instructor said, **"It's more like our courses give them a chance to practice what they would be learning at their sending schools, to apply it into a real world situation...but they need to have those standards met before they get to us."**

CTE administrators and instructors in this study as well as educators in the pre-professional programs held a common belief that their obligation was to "teach the syllabus in such a way that showed the student understands the [national or industry] model but always teach to the individual, what the student can do to reach that model." However, most professionals in these programs felt limited by the constrained time they had to engage with students. A CTE instructor said,

> Right now we're seeing a lot of kids that have a lot of literacy issues. And really, they should be working on those skills first. They should be doing some type of remediation in high school, but often they don't. So, we rely heavily on ourselves, either pulling them

aside and working on those skills with them or having some type of teaching assistants that float throughout the building...These kids come from area schools and are only here for the block we have them in class. There not here before or after school or during a study hall. So, doing any help outside of class is very hard. Most of the kids don't have their own transportation--we have several freshmen this year--to have a flexible schedule. They come and go on that bus.

Additionally, many students commuted up to an hour from their home high school to attend CTE programs. Therefore, instructors attempted to provide remediation within their class time, scheduled monitored yet non-compensated time outside of regular school days, parent education offerings and some CTE schools had teaching assistants to support students. However, most educators and administrators in this study believed students in their CTE programs needed more time, support or remediation to further develop the fundamental academic skills required to be successful in their CTE courses.

CTE as Standards-based Education Model

Despite the numerous challenges cited by participants in this study with regard to implementing Maine's proficiency-based diploma law in a manner that best served students enrolled in CTE programs, a resounding theme across schools and participants was that **CTE practices and approaches could be used as an established model for successful implementation of standards-based education.** Educators in CTEs and pre-professional programs frequently shared beliefs such as:

"We are teaching proficiencies already."

"As a CTE school, we pretty much do proficiency or competency anyway."

"Standards are fundamental in our course of study already. We are always assessing students on competencies."

A CTE director described, "Many programs have pre-test, post-test, align those scores against national averages. We have that as a measure of competency...our curriculum is standards-based with nationally-recognized standards. It has to be." In practice, CTE instructors also believed they had been implementing components of personalized learning for decades: "In our evaluation process we have industry standards, but we look at that student as an individual and whether they're achieving their maximum potential."

CTE educators acknowledged that their elective courses were taught in a different context than content areas required for graduation, "Giving an elective credit is not the same as giving a core credit. No school districts get sued because students didn't get enough elective credits. They get sued because they couldn't read or couldn't do math. So, we get the difference." However, **CTE educators and leaders believed they could provide training and support to academic content educators wanting further assistance with developing standards-based curriculum and assessments.** One teacher offered, "We could sit down, and we'd say this is what we're doing and these are the standards we're using and how we build our tests on competencies from the industry." In addition, many CTE educators perceived their instruction as more applied than traditional experiences:

> Something that makes the CTE model more effective, which also lends towards proficiency-based education, is that we're teaching the math for a purpose. We're applying it to something real world...a product that says, 'I did this. I built this. I did it correctly. My table stands up on all four legs because I did the math correctly.'

With this professional experience, many educators in our study indicated that they would appreciate collaborating with academic educators to share their expertise in building standards-based curricula, assessments, and applied instructional strategies.

Conclusions

There was an evident awareness that applied education offering pre-professional or industry-approved learning opportunities could be a beneficial, and even critical, experience for many high school students. Research suggests that at-risk students enrolled in CTE programs demonstrate better outcomes than peers with similar achievement who are not enrolled in CTE programs. However, in Maine, CTEs are not authorized to award high school diplomas and usually do not have educational professional staff certified in "academic" content areas. Therefore, most students enrolled in CTE schools must spend a combination of their school day at two locations and two distinct institutions. Because CTEs may serve multiple sending districts and Maine SAUs have various high school graduation requirements, aligning standards, grading systems and meeting all requirements needed to earn a diploma were reported to pose numerous challenges. Yet, when educators were able to engage in collaborative work involving CTE and academic educators, it was perceived as beneficial both to the reputation of CTE programs as well as the students.

Maine's recent law requiring implementation of a standards-based education system and proficiency-based diploma requirements in public school districts mandates implementation to begin in the academic year 2020-2021. This new mandate requires students to demonstrate proficiency in eight content standards and guiding principles as well as engage in educational experiences in at least three content areas during each year of their secondary schooling. CTE and pre-professional educators indicated that these requirements were perceived by their students and staff as being more demanding than prior requirements, thereby often presenting barriers for enrolling in educational programming outside of the required academic areas. Most recent amendments to this statute specifically offered an exception for students with CTE credentials that provides some leeway for incorporating vocational programming into the school day, but there is some ambiguity about interpretation of the statute and challenges that remain even when considering the exception.

Participants in this study from CTEs, pre-professional education programs and public SAUs shared the following common challenges for engaging in CTE programs under the most recent high school graduation requirements:

- Since the public SAU is the diploma-awarding institution, the final decision regarding a student's eligibility to earn a high school diploma is not within the realm of the CTE or pre-professional program. This meant CTE and pre-professional administrators spent significant time connecting with sending district administrators to develop agreements. In addition, programs receiving students from multiple districts did not have a common set of expectations, data management systems, grading policies, academic curricula standards or high school graduation requirements for all students in their school.
- There has been deliberate effort from the federal, state and local levels to articulate alignment between standards in required content areas and CTE or pre-professional programming. However, this work has revealed that CTE curricula rarely incorporate academic standards comprehensively and academic curricula do not cover all CTE course industry standards. Since many industry certifications, exams or determinations of proficiency are based on adult professionals with workplace experience, high school students do not consistently have the opportunity to demonstrate proficiency in industry standards in secondary school experiences.

- In fact, many CTE educators in this study indicated that the nationally-recognized, standards-based curricula of their program expected students to enter their courses with certain academic skills. The curricula and professional training of instructors did not include teaching fundamental skills in mathematics or literacy; it approached these skills as prerequisite knowledge for students in their classes.

Despite these challenges, many CTE educators and leaders described curriculum development, assessment practices and instruction in their courses that reflected a strong, established understanding and demonstration of standards-based education. CTE coursework and assessments have been competency-based for decades. The stringent process by which a CTE program is approved and reviewed requires implementation of standards-based education, proficiency-based reporting and individualized instruction. Therefore, many CTE educators in this study encouraged leaders and educators from across the state of Maine to recognize them as a resource and model for developing standards-based education systems and proficiency-based credentialing policies.

Recommendations

An Act to Implement Certain Recommendations of the Maine Proficiency Education Council (S.P. 660 - L.D. 1627) was passed into law as Chapter 489 amending the chaptered law, *An Act to Prepare Maine People for the Future Economy* (S.P.439 - L.D.1422), passed in 2012 requiring Maine's public school districts to implement proficiency-based diplomas and standards-based education systems. Evidence from this study examined implications of this recent policy within key programs, contexts and populations, specifically students with disabilities and within career and technical education programming.

With regard to implementing proficiency-based high school diploma requirements as they relate to **special education** programming and students eligible for special education services, the following recommendations are offered:

- Further clarify the role of the IEP to "maintain integrity of the standards" while providing "reasonable opportunity" for students with disabilities to make progress in "general education curriculum."
- Increase resources and support for professional development and engagement in educator collaboration, both within and across districts, to continue and expand collective work of special education and regular education teachers and leaders.
- Increase resources and support for districts to develop efficient, effective PK-12 systems of support for students failing to successfully demonstrate grade-level proficiency in required content areas.

With regard to implementing proficiency-based high school diploma requirements as they relate to **career and technical education** as well as pre-professional vocational programming and students interested in accessing these opportunities, the following recommendations are offered:

- Increase resources and support for professional development and engagement in educator collaboration, both within district and across districts, to continue and expand collective work of career and technical education and regular education teachers and leaders.
- Offer recognition and compensated opportunities for qualified career and technical education instructors to offer expertise to professional peers in developing and utilizing standards-based curricula as well as proficiency-based assessments and instruction.

- Continue support and development of crossover intersections between CTE and academic standards and curricula, and expand to include all career pathways offered in Maine.
- Amend Chapter 489 (S.P. 660 - L.D. 1627) §4722 subsection (3)(B-2) to clarify requirements for educational experiences in English language arts, mathematics, and science and technology.
- Establish a collective working group or task force with CTE instructors and leaders, academic educators and leaders, as well as Maine business and industry leaders to examine approaches for increasing student preparation for and access to CTE programs.

Maine's proficiency-based diploma policy is poised to have substantial consequences for students with special education needs and students enrolled in CTE programs. The graduating class of 2021—the first students to be included in the new requirements—are on the cusp of entering high school in the fall of 2017. Timely attention to the questions raised by special education and CTE educator is imperative to ensure that all Maine students have equitable opportunities for learning that will prepare them for post-secondary success.

References

An Act to Implement Certain Recommendations of the Maine Proficiency Education Council. Pub. L. No. S.P. 660 Chapter 489, 1627 L.D. (2016).

An Act to Prepare Maine People for the Future Economy. Pub. L. No. S.P. 439, § 4722, 1422 L.D. (2012).

Armour-Garb, A. (2007). *Intergovernmental approaches for strengthening K-12 accountability systems*. Chicago, Illinois: Nelson A. Rockefeller Institute of Government. Retrieved from http://eric.ed.gov/?id=ED502140

Asunda, P. A., Finnell, A. M., & Berry, N. R. (2015). Integration of the Common Core State Standards into CTE: Challenges and strategies of career and technical teachers. *Career and Technical Education Research*, *40*(1), 48–62. https://doi.org/10.5328/cter40.1.48

Backes-Gellner, U. (2014). Benefits of apprenticeship training and future challenges: empirical results and lessons from Switzerland and Germany | VOCEDplus, the international tertiary education and research database. Retrieved from http://www.voced.edu.au/content/ngv:62843

Bae, S. H., Gray, K., & Yeager, G. (2007). A retrospective cohort comparison of career and technical education participants and non-participants on a state-mandated proficiency test. *Career and Technical Education Research*, *32*(1), 9–22. https://doi.org/10.5328/CTER32.1.9

Brand, B. (2008). *Supporting high quality career and technical education through federal and state policy*. In Washington, DC: American Youth Policy Forum. Retrieved from http://www.usmayors.org/workforce/documents/10-10-08CTEMeetingPaper.pdf

Brodersen, R. M. (2016). *Toward the Development of a Program Quality Framework for Career and Technical Education Programs: A Researcher-Practitioner Collaborative Project*. Society for Research on Educational Effectiveness. Retrieved from https://eric.ed.gov/?id=ED567481

Carmichael, S. B., Martino, G., Porter-Magee, K., & Wilson, W. S. (2010). *The State of State Standards–and the Common Core–in 2010*. Washington, D.C.: Thomas B. Fordham Institute. Retrieved from http://eric.ed.gov/?id=ED516607

Castellano, M., Stone, J. R., Stringfield, S., Farley, E. N., & Wayman, J. C. (2004). *The effect of CTE-enhanced whole-school reform on student coursetaking and performance in English and science*. St. Paul, MN: National Research Center for Career and Technical Education, University of Minnesota. Retrieved from http://eric.ed.gov/?id=ED493611

Castellano, M., Stringfield, S., & Stone, J. R. (2001). *Career and technical education reforms and comprehensive school reforms in high schools and community colleges: Their impact*

on educational outcomes for at-risk youth. St. Paul, MN: National Research Center for Career and Technical Education, University of Minnesota. Retrieved from http://eric.ed.gov/?id=ED461720

Chase, D. (2010). STEM and career exploratory classes. *Techniques: Connecting Education and Careers (J1)*, *85*(3), 34–37.

Chrispeels, J. H., & Gonzalez, M. (2006). The challenge of systemic change in complex educational systems: A district model to scale up reform. In A. Harris & J. H. Chrispeels (Eds.), *Improving Schools and Educational Systems: International Perspectives* (pp. 241–273). New York, NY: Routledge.

Conderman, G., & Hedin, L. R. (2014). Co-teaching with strategy instruction. *Intervention in School and Clinic*, *49*(3), 156–163. https://doi.org/10.1177/1053451213496158

Cross, R. W., Rebarber, T., & Torres, J. (2004). *Grading the systems: The guide to state standards, tests, and accountability policies*. Washington, D.C.: Thomas B Fordham Foundation and Institute. Retrieved from http://eric.ed.gov/?id=ED485528

Elementary and Secondary Education Act of 1965. Pub. L. No. 89–10 (1965). Retrieved from https://www.gpo.gov/fdsys/pkg/STATUTE-79/pdf/STATUTE-79-Pg27.pdf

Elliot, J., Foster, B., & Franklin, E. (2005). *A five year high stakes test score comparison between career and technical education and other students*. Paper presented at the Career and Technical Education Research Conference, Kansas City, Mo.

Feuer, M. J., & Shavelson, R. J. (1996). Introduction. In A. Lesgold, M. J. Feuer, & A. M. Black (Eds.), *Transitions in work and learning: Implications for assessment*, 1–5. Washington, DC: National Academy Press.

Goals 2000: Educate America Act. Pub. L. No. 103–227, 1804 H.R. (1994). Retrieved from http://eric.ed.gov/?id=ED371299

Hanover Research Firm. (2012). *Teacher professional development for common core standards transition*. Retrieved from http://www.hanoverresearch.com/wp-content/uploads/2012/12/Hanover-Research-Teacher-Professional-Development-for-Common-Core-Standards-Transition.pdf

Hernández, V., & Brendefur, J. (2003). Developing authentic, integrated, standards-based mathematics curriculum: [More than just] an interdisciplinary collaborative approach. *Journal of Vocational Education Research*, *28*(3), 259–283. https://doi.org/10.5328/JVER28.3.259

Honig, M. (2006). Complexity and policy implementation: Challenges and opportunities for the field. In M. Honig (Ed.), *New directions in education policy implementation: Confronting complexity* (pp. 1–25). Albany, New York: State University of New York Press. Retrieved from https://www.sunypress.edu/pdf/61303.pdf

Jennings, J. L., & Bearak, J. M. (2014). "Teaching to the test" in the NCLB era: How test predictability affects our understanding of student performance. *Educational Researcher*, *43*(8), 381–389. https://doi.org/10.3102/0013189X14554449

Jobs for the Future. 2005. *Career and Technical Education in Pennsylvania: Opportunities for Commonwealth Policy*. Boston, MA: Jobs for the Future.

Kazis, R., & Goldberger, S. (1995). The role of employers: The integration of work-based learning. In W. N. Grubb (Ed.), *Education through occupations in American schools, Vol.2: The challenges of implementing curriculum integration*, 171-190. New York: Teachers College Press.

Kentucky Labor Cabinet. (2013). *Policy on Youth Pre-Apprenticeship*. Retrieved from http://education.ky.gov/cte/cter/documents/kentucky%20labor%20cabinet%20pre-apprenticeship%20policy.pdf

Lee, J., Liu, X., Amo, L. C., & Wang, W. L. (2014). Multilevel linkages between state standards, teacher standards, and student achievement: Testing external versus internal standards-based education models. *Educational Policy*, *28*(6), 780–811. https://doi.org/10.1177/0895904813475708

Levesque, K., Laird, J., Hensley, E., Choy, S. P., Cataldi, E. F., & Hudson, L. (2008). *Career and technical education in the United States: 1990 to 2005. Statistical analysis report*. NCES 2008-035. National Center for Education Statistics. Retrieved from http://eric.ed.gov/?id=ED502109

Lieberman, A., & Miller, L. (2011). *Teacher Leadership*. Hoboken, NJ: John Wiley & Sons.

Maine Department of Education. (2017). *Maine PD requirements beginning 2020*. Retrieved http://www.maine.gov/doe/cte/laws/documents/Maine%20PD%20requirements%20beginning%202020.pdf

Meeder, H., & Suddreth, T. (2012). *Common Core State Standards and career and technical education: Bridging the divide between college and career readiness*. Achieve, Inc. Retrieved from http://eric.ed.gov/?id=ED532391

Meyer, J. (2008). *The adoption of new technologies and the age structure of the workforce*. ZEW - Centre for European Economic Research Discussion Paper No. 08-045. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1210162

Mueller, T. G. (2009). Alternative dispute resolution: A new agenda for special education policy. *Journal of Disability Policy Studies*, *20*(1), 4–13. https://doi.org/10.1177/1044207308315285

National Commission on Excellence in Education. (1983). *A Nation at Risk: The Imperative for Educational Reform. An Open Letter to the American People. A Report to the Nation and*

the Secretary of Education. Washington, D.C.: U.S. Department of Education. Retrieved from http://eric.ed.gov/?id=ED226006

National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards*. Washington, D.C.: Authors.

No Child Left Behind Act of 2001. Pub. L. No. 107–110. Retrieved from https://www.gpo.gov/fdsys/pkg/STATUTE-115/pdf/STATUTE-115-Pg1425.pdf

Noell, G. H., & Gansle, K. A. (2009). Moving from good ideas in educational systems change to sustainable program implementation: Coming to terms with some of the realities. *Psychology in the Schools*, *46*(1), 79–89. https://doi.org/10.1002/pits.20355

Pauly, E.; Kopp, H.; and Haimson, J. (1994) *Home-Grown Lessons: Innovative Programs Linking Work and High School*. New York, NY: Manpower Demonstration Research Corporation.

Phillips, G. W. (2016). *National benchmarks for state achievement standards*. Washington, D.C.: American Institute for Research. Retrieved from http://www.air.org/sites/default/files/downloads/report/National-Benchmarks-State-Achievement-Standards-February-2016_rev.pdf

Plank, S., deLuca, S., & Estacion, A. (2005). *Dropping out of high school and the place of career and technical education: A survival analysis of surviving high schools*. Columbus, OH: National Dissemination Center for Career and Technical Education - The Ohio State University. Retrieved from http://files.eric.ed.gov/fulltext/ED497348.pdf

Polkinghorne, F. W., Hagler, B., & Anderson, M. (2010). Reading skill development: A survey of need and responsibility. *The Journal of Research in Business Education*, *52*(1), 32.

Porter, A. C., Polikoff, M. S., & Smithson, J. (2009). Is there a de facto national intended curriculum? Evidence from state content standards. *Educational Evaluation and Policy Analysis*, *31*(3), 238–268. https://doi.org/10.3102/0162373709336465

Rusch, E. (2016, 09). Construction firms look to untapped resource for workers — women. *The Denver Post*. Retrieved from http://www.denverpost.com/2016/03/09/construction-firms-look-to-untapped-resource-for-workers-women/

Sheehy, K. (2012, Sept. 28) Common core standards are a 'heavy lift' for districts, educators. *U.S. News & World Report*. Retrieved from http://www.usnews.com/education/high-schools/articles/2012/09/28/common-core-standards-are-a-heavy-lift-for-districts-educators

Silverberg, M., Warner, E., Fong, M., & Goodwin, D. (2004). *National assessment of vocational education: Final report to Congress*. Washington, D.C.: U.S. Department of Education. Retrieved from http://files.eric.ed.gov/fulltext/ED483149.pdf

Stone, J.R. (2000). Editor's Notes. *Journal of Vocational Education Research,* 25:85–91.

Stone, J. R. (2003). *Career and technical education, career pathways, and work-based learning: Changes in participation, 1997-1999*. National Research Center for Career and Technical Education. Retrieved from https://eric.ed.gov/?id=ED508969

Stone, J.R. & Aliaga, O. (2005). Career & technical education and school-to-work at the end of the 20th century: Participation and outcomes. *Career and Technical Education Research*, *30*(2), 125–144.

Stump, E., & Silvernail, D. (2014). *Implementation of a proficiency-based diploma system: Early experiences in Maine*. Gorham, ME: University of Southern Maine. Retrieved from http://digitalcommons.usm.maine.edu/cepare_proficiency/2

Stump, E., & Silvernail, D. (2015). *Proficiency-based diploma systems in Maine: Implementing district-level high school graduation policies*. Gorham, ME: University of Southern Maine. Retrieved from http://digitalcommons.usm.maine.edu/cepare_proficiency/3

Stump, E., Silvernail, D., Fallona, C., & Moran Gunn, L. (2013). *Maine's improving schools: An examination of distinguishing features of a sample of Maine's improving public schools*. Gorham, Maine: University of Southern Maine. Retrieved from http://digitalcommons.usm.maine.edu/cepare_improvement/1

Thompson, J. F. (1973). *Foundations of vocational education: social and philosophical concepts*. Englewood Cliffs, N.J.: Prentice-Hall.

U.S. Department of Education. (2015, November 16). *OSERS policy guidance on FAPE*. Retrieved from https://www2.ed.gov/policy/speced/guid/idea/memosdcltrs/guidance-on-fape-11-17-2015.pdf

U.S. Education Delivery Institute. (2015). *PBE implementation progress survey data analysis (for Maine Department of Education)*. Retrieved from http://www.maine.gov/doe/proficiency/support/GTP-website-Aggregate-Results-of-PBE-implementation.pdf

Young, T., & Lewis, W. D. (2015). Educational policy implementation revisited. *Educational Policy*, *29*(1), 3–17. https://doi.org/10.1177/0895904815568936

Appendix A: USDOE FAPE Guidance Letter, 2015

UNITED STATES DEPARTMENT OF EDUCATION
OFFICE OF SPECIAL EDUCATION AND REHABILITATIVE SERVICES

November 16, 2015
Dear Colleague:
Ensuring that all children, including children with disabilities, are held to rigorous academic standards and high expectations is a shared responsibility for all of us. To help make certain that children with disabilities are held to high expectations and have meaningful access to a State's academic content standards, we write to clarify that an individualized education program (IEP) for an eligible child with a disability under the Individuals with Disabilities Education Act (IDEA) must be aligned with the State's academic content standards for the grade in which the child is enrolled.1 Research has demonstrated that children with disabilities who struggle in reading and mathematics can successfully learn grade-level content and make significant academic progress when appropriate instruction, services, and supports are provided.2 Conversely, low expectations can lead to children with disabilities receiving less challenging instruction that reflects below grade-level content standards, and thereby not learning what they need to succeed at the grade in which they are enrolled. The cornerstone of the IDEA is the entitlement of each eligible child with a disability to a free appropriate public education (FAPE) that emphasizes special education and related services designed to meet the child's unique needs and that prepare the child for further education, employment, and independent living. 20 U.S.C. §1400(d)(1)(A). Under the IDEA, the primary vehicle for providing FAPE is through an appropriately developed IEP that is based on the individual needs of the child. An IEP must take into account a child's present levels of academic achievement and functional performance, and the impact of that child's disability on his or her involvement and progress in the general education curriculum. IEP goals must be aligned with grade-level content standards for all children with disabilities. The State, however, as discussed on page five, is permitted to define alternate academic achievement standards for children with the most significant cognitive disabilities.3

Application of Provisions in the Elementary and Secondary Education Act of 1965 to Children with Disabilities
Since 2001, the Elementary and Secondary Education Act of 1965 (ESEA), as amended by the No Child Left Behind Act of 2001 (NCLB), has required each State to apply the same challenging academic content and achievement standards to all schools and all children in the State, which includes children with disabilities. 20 U.S.C. §6311(b)(1)(B). The U.S. Department of Education (Department), in its regulations implementing Title I of the ESEA, has clarified that these standards are grade-level standards. 34 CFR §200.1(a)-(c). To assist children with disabilities in meeting these grade-level academic content standards, many States have adopted and implemented procedures for developing standards-based IEPs that include IEP goals that reflect the State's challenging academic content standards that apply to all children in the State.

Interpretation of "General Education Curriculum"

Under the IDEA, in order to make FAPE available to each eligible child with a disability, the child's IEP must be designed to enable the child to be involved in and make progress in the general education curriculum. 20 U.S.C. §1414(d)(1)(A). The term "general education curriculum" is not specifically defined in the IDEA. The Department's regulations implementing Part B of the IDEA, however, state that the general education curriculum is "the same curriculum as for nondisabled children." 34 CFR §300.320(a)(1)(i). In addition, the IDEA Part B regulations define the term "specially designed instruction," the critical element in the definition of "special education," as "adapting, as appropriate to the needs of an eligible child, the content, methodology, or delivery of instruction to address the unique needs of the child that result from the child's disability and to ensure access of the child to the general curriculum, *so that the child can meet the educational standards within the jurisdiction of the public agency that apply to all children*." 34 CFR §300.39(b)(3) (emphasis added). Otherwise, the IDEA regulations do not specifically address the connection between the general education curriculum and a State's academic content standards Analysis

The Department interprets "the same curriculum as for nondisabled children" to be the curriculum that is based on a State's academic content standards for the grade in which a child is enrolled. This interpretation, which we think is the most appropriate reading of the applicable regulatory language, will help to ensure that an IEP for a child with a disability, regardless of the nature or severity of the disability, is designed to give the child access to the general education curriculum based on a State's academic content standards for the grade in which the child is enrolled, and includes instruction and supports that will prepare the child for success in college and careers. This interpretation also appropriately harmonizes the concept in the IDEA regulations of "general education curriculum (i.e., the same curriculum as for nondisabled children)," with the ESEA statutory and regulatory requirement that the same academic content standards must apply to all public schools and children in the State, which includes children with disabilities.

The IDEA statutory and regulatory provisions discussed above, the legislative history of the IDEA, and clarification the Department has provided on the alignment of the IEP with a State's content standards in the Analysis of Comments and Changes to the 2006 IDEA Part B regulations also support this interpretation. When it last reauthorized the IDEA in 2004, Congress continued to emphasize, consistent with the provisions in the ESEA, the importance of "having high expectations for [children with disabilities] and ensuring their access to the general education curriculum in the regular classroom, to the maximum extent possible." 20 U.S.C. §1400(c)(5)(A). The Senate Report accompanying the 2004 reauthorization of the IDEA also explained that "[f]or most children with disabilities, many of their IEP goals would likely conform to State and district wide academic content standards and progress indicators consistent with standards based reform within education and the new requirements of NCLB." S. Rep. No. 108-185, 105th Cong., 1st Sess. 29 (Nov. 3, 2003).

The Analysis of Comments and Changes accompanying the 2006 IDEA Part B regulations also included important discussion that further clarifies the alignment of an IEP with a State's academic content standards under the ESEA, explaining: "section 300.320(a)(1)(i) clarifies that the general education curriculum means the same curriculum as all other children. Therefore, an IEP that focuses on ensuring that the child is involved in the general education curriculum will necessarily be aligned with the State's content standards."4

The Department recognizes that there is a very small number of children with the most significant cognitive disabilities whose performance must be measured against alternate

academic achievement standards, as permitted in 34 CFR §200.1(d) and §300.160(c).As explained in prior guidance,6 alternate academic achievement standards must be aligned with the State's grade-level content standards. The standards must be clearly related to grade-level content, although they may be restricted in scope or complexity or take the form of introductory or pre-requisite skills. This letter is not intended to limit a State's ability to continue to measure the achievement of the small number of children with the most significant cognitive disabilities against alternate academic achievement standards, but rather to ensure that annual IEP goals for these children reflect high expectations and are based on the State's content standards for the grade in which a child is enrolled.

In a case where a child's present levels of academic performance are significantly below the grade in which the child is enrolled, in order to align the IEP with grade-level content standards, the IEP Team should estimate the growth toward the State academic content standards for the grade in which the child is enrolled that the child is expected to achieve in the year covered by the IEP. In a situation where a child is performing significantly below the level of the grade in which the child is enrolled, an IEP Team should determine annual goals that are ambitious but achievable. In other words, the annual goals need not necessarily result in the child's reaching grade-level within the year covered by the IEP, but

the goals should be sufficiently ambitious to help close the gap. The IEP must also include the specialized instruction to address the unique needs of the child that result from the child's disability necessary to ensure access of the child to the general curriculum, so that the child can meet the State academic content standards that apply to all children in the State.

An Example of Implementation

We provide an example of how an IEP Team could apply the interpretation of "general education curriculum" set forth in this letter. For example, after reviewing recent evaluation data for a sixth grade child with a specific learning disability, the IEP Team determines that the child is reading four grade levels below his current grade; however, his listening comprehension is on grade level. The child's general education teacher and special education teacher also note that when materials are read aloud to the child he is able to understand grade-level content. Based on these present levels of performance and the child's individual strengths and weaknesses, the IEP Team determines he should receive specialized instruction to improve his reading fluency. Based on the child's rate of growth during the previous school year, the IEP Team estimates that with appropriate specialized instruction the child could achieve an increase of at least 1.5 grade levels in reading fluency. To ensure the child can learn material based on sixth grade content standards (e.g., science and history content), the IEP Team determines the child should receive modifications for all grade-level reading assignments. His reading assignments would be based on sixth grade content but would be shortened to assist with reading fatigue resulting from his disability. In addition, he would be provided with audio text books and electronic versions of longer reading assignments that he can access through synthetic speech. With this specialized instruction and these support services, the IEP would be designed to enable the child to be involved and make progress in the general education curriculum based on the State's sixth grade content standards, while still addressing the child's needs based on the child's present levels of performance.7 This example is provided to show one possible way that an IEP could be designed to enable a child with a disability who is performing significantly below grade level to receive the specialized instruction and support services the child needs to reach the content standards for

the grade in which the child is enrolled during the period covered by the IEP.8 We caution, though that, because the ways in which a child's disability affects his or her involvement and progress in the general education curriculum are highly individualized and fact-specific, the instruction and supports that might enable one child to achieve at grade-level may not necessarily be appropriate for another child with the same disability.

Summary
In sum, consistent with the interpretation of "general education curriculum (i.e., the same curriculum as for nondisabled children)" based on the State's academic content standards for the grade in which a child is enrolled set forth in this letter, an IEP Team must ensure that annual IEP goals are aligned with the State academic content standards for the grade in which a child is enrolled. The IEP must also include the specially designed instruction necessary to address the unique needs of the child that result from the child's disability and ensure access of the child to the general education curriculum, so that the child can meet the State academic content standards that apply to all children, as well as the support services and the program modifications or supports for school personnel that will be provided to enable the child to advance appropriately toward attaining the annual goals.

Opportunities for Input
We are interested in receiving comments on this document to inform implementation of this guidance. If you are interested in commenting on this document, please e-mail your comments to iepgoals@ed.govor write to us at the following address: US Department of Education,55012th Street SW, PCP Room 5139, Washington, DC 20202-2600. Note that we are specifically interested in receiving input from the field on examples of models of alignment of IEP goals with State content

standards that are working well at the State and local level, and how this guidance could be implemented for children with disabilities who are English learners and children with the most significant cognitive disabilities. We will share appropriate models with you in further communications as they become available. We would also be glad to help answer your questions and help with your technical assistance needs in this important area.
We ask you to share this information with your local school districts to help ensure all children with disabilities are held to high standards and high expectations. Thank you for your continued interest in improving results for children with disabilities.

Sincerely,
Michael K. Yudin
Assistant Secretary
/s/
Melody Musgrove
Director
Office of Special Education Programs

1 The Department has determined that this document is a "significant guidance document" under the Office of Management and Budget's Final Bulletin for Agency Good Guidance Practices, 72 Fed. Reg. 3432 (Jan. 25, 2007), available at

www.whitehouse.gov/sites/default/files/omb/fedreg/2007/012507_good_guidance.pdf. The purpose of this guidance is to provide State and local educational agencies (LEAs) with information to assist them in meeting their obligations under the IDEA and its implementing regulations in developing IEPs for children with disabilities. This guidance does not impose any requirements beyond those required under applicable law and regulations. It does not create or confer any rights for or on any person. If you are interested in commenting on this guidance or if you have further questions that are not answered here, please e-mail iepgoals@ed.gov or write to us at the following address: U.S. Department of Education, Office of Special Education and Rehabilitative Services, 550 12th Street SW., PCP Room 5139, Washington, DC 20202-2600.

2 For a discussion of this research *see Improving the Academic Achievement of the Disadvantaged; Assistance to States for the Education of Children with Disabilities,* Final Rule, 80 Fed. Reg. 50773, 50776 (Aug. 21, 2015).

3 In accordance with 34 CFR §200.1(d), for children with the most significant cognitive disabilities who take an alternate assessment, a State may define alternate academic achievement standards provided those standards are aligned with the State's academic content standards; promote access to the general curriculum; and reflect professional judgment of the highest achievement standards possible. See also 34 CFR §300.160(c)(2)(i).

4 *See* Assistance to States for the Education of Children with Disabilities and Preschool Grants for Children with Disabilities, Final Rule, 71 Fed. Reg. 46540, 46662 (Aug. 14, 2006); see also 71 Fed. Reg. 46579.

5 The IEP must include, among other required content: (1) a statement of the child's present levels of academic achievement and functional performance, including how the child's disability affects the child's involvement and progress in the general education curriculum; (2) a statement of measurable annual goals, including academic and functional goals, designed to meet the child's needs that result from the child's disability to enable the child to be involved in and make progress in the general education curriculum; and (3) the special education and related services and supplementary aids and services, based on peer-reviewed research to the extent practicable, to be provided to the child, or on behalf of the child, and a statement of the program modifications or supports for school personnel that will be provided to enable the child to advance appropriately toward attaining the annual goals, and to be involved in and make progress in the general education curriculum in accordance with the child's

present levels of performance. 34 CFR §300.320(a).

6 See U.S. Department of Education Non-regulatory guidance: Alternate achievement standards for students with the most significant cognitive disabilities August 2005) available at: https://www2.ed.gov/policy/elsec/guid/altguidance.pdf

7 For information on developing, reviewing, or revising the IEP for a child with limited English proficiency, *see*: *Questions and Answers Regarding Inclusion of English Learners with Disabilities in English Language Proficiency Assessments and Title III Annual Measurable Achievement Objectives* https://www2.ed.gov/policy/speced/guid/idea/memosdcltrs/q-and-a-on-elp-swd.pdf. 8 While the Department does not mandate or endorse specific products or services, we are aware that many States have issued guidance addressing standards-based IEPs. For example, see Minnesota Department of Education, Developing Standards-Based IEP Goals and Objectives *A Discussion Guide* available at: https://education.state.mn.us/mdeprod/idcplg?IdcService=GET_FILE&dDocName=050483&RevisionSelectionMethod=latestReleased&Rendition=primary. States and LEAs also may consider

reviewing the following examples from OSEP-funded projects regarding implementation of standards-based IEPs: *inForum: Standards-Based Individualized Education Program Examples* available at: www.nasdse.org/portals/0/standards-basediepexamples.pdf. For an example of annual goals aligned with State academic content standards for a child taking the alternate assessment based on alternate academic achievement standards, *see*: an issue brief provided by the OSEP-funded National Center and State Collaborative (NCSC), *NCSC Brief 5: Standards-based Individualized Education Programs (IEPs) for Children Who Participate in AA-AAS* available at: http://www.ncscpartners.org/Media/Default/PDFs/Resources/NCSCBrief5.pdf.

8. While the Department does not mandate or endorse specific products or services, we are aware that many States have issued guidance addressing standards-based IEPs. For example see Minnesota Department of Education, Developing Standards-Based IEP Goals and Objectives *A Discussion Guide* available at: https://education.state.mn.us/mdeprod/idcplg?IdcService=GET_FILE&dDocName=050483&RevisionSelectionMethod=latestReleased&Rendition=primary. States and LEAs also may consider reviewing the following examples from OSEP-funded projects regarding implementation of standards-based IEPs: *inForum: Standards-Based Individualized Education Program Examples* available at: www.nasdse.org/portals/0/standards-basediepexamples.pdf. For an example of annual goals aligned with State academic content standards for a child taking the alternate assessment based on alternate academic achievement standards, *see*: an issue brief provided by the OSEP-funded National Center and State Collaborative (NCSC), *NCSC Brief 5: Standards-based Individualized Education Programs (IEPs) for Children Who Participate in AA-AAS* available at: http://www.ncscpartners.org/Media/Default/PDFs/Resources/NCSCBrief5.pdf.

Appendix B: MDOE Proficiency Diploma Guidance, 2017

STATE OF MAINE
DEPARTMENT OF EDUCATION
23 STATE HOUSE STATION
AUGUSTA, ME 04333-0023

PAUL R. LEPAGE
GOVERNOR

HASSON, JR
COMMISSIONER

ROBERT G.
ACTING

Proficiency Diplomas

Guidance for Students with Disabilities

January 31, 2017

The Maine Department of Education is providing guidance on the following questions from the field:

Question: Can the level of "rigor" of the standard be changed for students with disabilities, depending on the disability?

Answer: For certification of proficiency, the complexity of the thinking must be at the same level of cognitive demand required by the reporting standard and its performance indicators. So for example, a standard that requires a student to "classify" cannot be changed to a requirement to "recall" or "identify".

Question: Can the IEP define the threshold for proficiency (less than high school), for example, 2.7, vs. 3?

Answer: No, the proficiency level must be the same for all students, both in the certification of high school standards and in the use of a consistent threshold value for all students.

Question: In the law it states "maintains the integrity of the standards as specified in the IEP". Clarification: the IEP can define the performance tasks and accommodations, but not articulate the standards, correct?

Answer: Correct. The IEP cannot change the complexity of the thinking or the conceptual understandings or skill level the standards are requiring for demonstration of proficiency. We recognize there are times when a child's performance may not be at the high school level. In these cases, IEPs are written at the child's present level of performance to honor where the child is functioning with the intent to continue to support growth towards proficiency at the high school level.

Question: Is "performance tasks" meant to be an example of preponderance of evidence, or is that the only way? Then what is a performance task?

Answer: The reference to performance tasks is a recognition of the multiple ways in which a student might demonstrate proficiency. It is a recognition of an appropriate way of gathering evidence. It should not be interpreted as requiring a preponderance of evidence to come from performance tasks. It is just a reference to one tool among many that might be used for gathering evidence of student proficiency.

OFFICES LOCATED AT THE BURTON M. CROSS STATE OFFICE BUILDING
PHONE (207) 624-6600 FAX: (207) 624-6700 TTY USERS CALL MAINE RELAY 711

AN EQUAL OPPORTUNITY EMPLOYER
ONLINE: WWW.MAINE.GOV/DOE

Question: Can the performance indicators vary for a student, but the standards must be kept the same?

Answer: For certification of proficiency, when we say standards, we mean reporting standards with a list of performance indicators that support that standard. A student does not have to meet all of the performance indicators but must have enough of a body of evidence from the performance indicators to demonstrate proficiency in the conceptual understandings and skills required of the reporting standard. The question is "Do the chosen objective(s) represent the integrity of the standards sufficiently for a teacher to have confidence that the student has the enduring understanding and skills supporting that understanding?"

Question: Can the IEP trim the number of indicators that feed the standard score?

Answer: The performance indicators were intended to provide guidance regarding the breadth and depth of the content standards/reporting standards. Each reporting standard has a statement that describes the enduring understanding this reporting standard contributes to the content area. If an IEP Team decides to select performance indicators from a set of performance indicators for a reporting standard, they are encouraged to check to be sure the selected performance indicators will provide the student with the opportunity to learn and demonstrate the enduring understanding of the reporting standard.

Question: Can a content area be waived?

Answer: No.

Appendix C: MDOE *Policy on Standards-based IEP Goals*, 2015

STATE OF MAINE
DEPARTMENT OF EDUCATION
23 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0023

PAUL R. LEPAGE
GOVERNOR

THOMAS A. DESJARDIN
ACTING COMMISSIONER

Policy on Standards-Based IEP Goals

"Being in special education does not mean that a student cannot learn and reach grade-level standards. In fact, the majority of students with disabilities should be able to meet those standards. Special education provides the additional help and support that these students need to learn. This means designing instruction to meet their specific needs and providing supports, such as physical therapy, counseling services, or interpreting services, to help students learn alongside their peers and reach the same high standards as all other students." (Working Together for Students with Disabilities: Individuals with Disabilities Education Act (IDEA) and No Child Left Behind Act (NCLB). Frequently Asked Questions, December 2005).

1. All Individualized Education Program (IEP) goals must be based on the student's strengths, weaknesses and needs. Goals must also be based on the student's present level of academic and functional performance (PLAFP). In reporting the student's present level of academic performance, the PLAFP must also address the student's academic achievement relative to the student's grade level standards, given supplemental aids and services where appropriate. Where the student is not successfully meeting grade level standards, the PLAFP must identify the standards that the student has successfully met.

2. FAPE requires access to the general curriculum and to the LRE. We are not changing the FAPE standard to require maximization of learning/educational benefit. We are enforcing IDEA's requirement that students with disabilities access the general education curriculum as appropriate based on their individualized needs. Therefore, for all students requiring specially designed instruction (SDI), goals must address:

 - Academic and/or functional, social, behavioral, physical and/or other educational needs resulting from the child's disability, in a way that:
 - Allows the child to access and make progress in the general education curriculum (FAPE); and
 - Allows the child to access and make progress in the general education classroom (LRE), as appropriate.

A standards-based academic IEP goal is aligned with State standards and is chosen to facilitate the student's progress toward the achievement of grade-level academic standards, whenever appropriate.

OFFICES LOCATED AT THE BURTON M. CROSS STATE OFFICE BUILDING AN EQUAL OPPORTUNITY EMPLOYER
PHONE: (207)624-6600 FAX: (207)624-6700 TTY USERS CALL MAINE RELAY 711 ONLINE: WWW.MAINE.GOV/DOE

3. In developing academic goals for a student's IEP, the IEP Team should consider each grade level standard as to whether:

 a) The student can reasonably be expected to meet that standard in the coming year without need of SDI or accommodation, in which case it should not be referenced in the IEP;

 b) The student can reasonably be expected to meet that standard in the coming year with accommodations in the regular education setting, in which case the accommodations should be described with sufficient specificity in Section 5 of the IEP;

 c) The student can reasonably be expected to meet that standard in the coming year with SDI (including consultation by a special education teacher in the regular education classroom), and possibly accommodations as well, in which case an IEP goal must be written for that standard which references the SDI and accommodations to be provided in connection with that goal (Example: By June 20, 2014, given a digital graphic organizer to record passage details, Charles will determine a theme of a story, drama or poem from details in the text with 100 percent independence on weekly assignments in ELA classes as measured by student work samples.) (MLR: ELA 4.RL.2) ; or

 d) The student cannot reasonably be expected to meet that standard in the coming year even with the provision of SDI and accommodations, in which case the standard should be broken into its components in order to identify its critical elements and those subskills which represent weaknesses for the student. IEP goals must be written addressing those elements and sub-skills, referencing any non-grade level standard that addresses those sub-skills at that level of development, referencing the SDI and accommodations to be provided in connection with those goals, and targeting a reasonable expectation of progress in the development of those sub-skills.

4. "Accommodations mean changes in the manner in which instruction and assessment is delivered that does not alter the curriculum level expectation being measured or taught" (MUSER II.2). To access the general education curriculum, students requiring specially designed instruction may also need accommodations.

 - Section 4 of the IEP will state accommodations specific to stated goals needed to access the general education curriculum, if appropriate.

 - Section 5 of the IEP will include accommodations that are to be used in the general education setting, if appropriate

5. Beginning with the 2016-17 school year, the Maine Department of Education will expect to find standards-based academic goals in each IEP it reviews, wherever appropriate.

Appendix D: Special Education (Part A) Interview Protocol

ADMINISTRATIVE or EDUCATOR INTERVIEW GUIDE / FOCUS GROUP PROTOCOL

District Administrators, Special Education Administrators, Special Education teachers, etc.

School/district Name:_____Date: _____ Time: _____

Introduction: Thank you for your willingness to talk with me today. I am _____, a research associate working at CEPARE, an education policy research center at USM. We're here because the Education Committee of the state legislature commissioned a study to better understand what standards-based education looks like in Maine. And I'd like to talk to you about your role and experience with developing proficiency-based diploma systems at your school/district. We're doing interviews with administrators, teachers and staff at all of our case study districts to better understand what characterizes the challenges, needs and opportunities of a Proficiency-based Diploma System in Maine specifically as it relates to Special Education students as well as Career and Technical Education programs. The information from these interviews will be pulled together with other documents to get a sense of what is happening in your district and other districts in the state. Your participation is voluntary. This interview will only be used for the purposes of this research study and will be confidential. I will not identify you by name in the report. We request that you do your part to maintain confidentiality for all the participants by not sharing the information shared within this interview outside of the interview setting. However, please note that we cannot guarantee that all participants will maintain confidentiality after this interview. I don't think you'll be surprised by any of our questions, but you may choose to skip a question or stop the interview at any time. The interview should last about 60 minutes. Would you mind if I record the interview? It will help me stay focused on our conversation, and it will ensure I have an accurate record of what we discussed.

Additional contextual details if participants inquire: This study was commissioned by the legislative Committee on Education and Cultural Affairs. The task of the study is to compile a fifth-year of data on the goals, needs and successes of implementing a Proficiency-based Diploma System in Maine, as directed in LD 1422 and LD 1627, which require that high school/district students earn a proficiency-based (as opposed to time-based or credit-based) diploma by 2021 with certain academic standards phased in by 2025. Findings of this study will be reported to the Education Committee early in 2017 and a public report of the study will be available the following summer. The purpose of the study is to document (NOT evaluate) some of the work being done to implement Proficiency-based Diploma Systems in Maine.

For question about the research or in the event of a research-related injury, please contact the Erika Stump at erika.stump@maine.edu or (207) 228.8117. For questions about research subjects' rights, please contact the Human Protections Administrator, University of Southern Maine at usmorio@maine.edu or (207) 228-8434.

Note: Questions asked of people in different roles may vary.

Background/Opening: To start, could you tell me about your role in the school/district/district?

Role / Content Area, Grade Level Focus: _____

Years at School/district/District: _____

(PROBE: years in district, various grade levels, any experience in other related fields, past experience in education as professional if any, etc.)

UNDERSTANDING WHAT IS MEANT BY A PROFICIENCY-BASED DIPLOMA SYSTEM

1. What is needed (from your school, community, district, state, etc.) for your district to fully implement a proficiency-based diploma system (PBDS) that is successfully inclusive of students eligible for Special Education services?

 Possible Probe Questions:

 - Predicting what your district will look like five years from now, do you think the steps to fully implement a PBDS that is successfully inclusive of students eligible for Special Education services will be further developed, maintained or abandoned?
 - What elements did you mention that are needed that you may not have included in your district's plan/application to MDOE? Why are they not included?

2. Describe your vision of PBDS successfully implemented.
3. What are the specific benefits of implementing a PBDS within your district's/school's Special Education services?
4. What are the specific challenges of implementing a PBDS within your district's/school's Special Education services?

 Possible Probe Questions:

 - How would you define Standards-based Education? Is it distinct from or synonymous with Proficiency Based Learning?
 - How do students gain knowledge, learn new skills, improve upon prior knowledge, etc.?
 - How is student work assessed? What is the purpose of assessment?
 - How are work habits, enthusiasm for learning, collaboration and organization developed in students?
 - How do students progress through their learning goals and the education system?
 - What role do learning experiences outside of the traditional school hours and building play in all students' education?

 How is equity maintained?

CURRICULUM & INSTRUCTION

5. How are elements of the curriculum and instruction of your Special Education programming different from prior to implementing PBDS? What supporting structures and/or barriers have been a part of the change?

 Possible Probe Questions:
 - What past practices have been commonly discontinued? What new practices have been commonly implemented?
 - Do educators use external curriculum materials, such as textbooks, packaged units, online learning units/programs, worksheets, etc.? If so, do you feel there has been an increase or decrease in these externally developed, standardized materials in curriculum and instruction since adopting PBDS?
 - What role has technology played in providing instruction and curriculum to students?
 - Have you received any feedback (from students, parents, or other teachers of students eligible for Special Education services) about these changes? (both broader policy and curriculum shifts, where evident)

6. Can students access courses or learning experiences outside of the school/district's offerings, e.g. online courses, college courses, advanced courses not offered by the school, content areas not offered by the school, internships, etc.? How are these course/learning experiences aligned with defined standards? How are students assessed and/or determined to be "proficient" in these courses/learning experiences?
 - What role has technology (online learning, adaptive technology, data management systems, communication, etc.) played in the learning experiences, opportunities, communication and data management of students eligible for Special Education services as they progress through a PBDS?

PROFICIENCY BASED STUDENT PROGRESS

7. How is it determined that a student in your Special Education program is proficient in the content area standards required for high school graduation?
 Possible Probe Questions:
 - Has your school or program developed standards for guiding principles/work habits/21st century skills? If so, how is it determined when a student is proficient in these? Is this common throughout the school/program/district?
 - What is the student's next step if he/she does not demonstrate proficiency on a formative assessment? What is the educator's next step if a student does not demonstrate proficiency on a formative assessment?
 - What is the student's next step if he/she does not demonstrate proficiency on a summative assessment? What is the educator's next step if a student does not demonstrate proficiency on a summative assessment?
 - What is the student's next step if she/he demonstrates proficiency on all standards for a content area or learning level?

- Do teachers implement deadlines at your school/district for submission of completed work? If so, what is the consequence for not meeting deadlines? If not, what is the next step if a student fails to submit assigned work?

8. How are students placed in courses? (E.g. grade level, age, prior performance, prerequisite course completion, entrance exam, etc.) And what determines a student's change of course? program? instructor?
9. What happens when students with an IEP transfer to the district, or return from an out-of-district placement such as day treatment?
10. Identify specific barriers you perceive in scheduling, school/district/program policy, transportation, and/or fiscal resources that may prevent a proficiency-based progression system to be successfully implemented.
11. Identify specific staffing, certification and/or contractual requirements that you believe may prevent a proficiency-based progression system to be successfully implemented.
12. Identify specific strategies, resources and/or systemic structures (potential or currently in-place) that you feel could facilitate the implementation of a successful proficiency based-diploma system.
13. What is the implementation timeline for your district/program to adopt approved proficiency-based high school graduation requirements for all students in all required subject areas?

LEARNING MANAGEMENT SYSTEM

14. How is student assessment data recorded, shared, accessed, and managed?
 i. Does your school/district/program use online services or software programs to manage student work or student assessment data? If so, please identify the provider or program. What are the strengths and weaknesses of this program/service? Would you recommend it for use in other schools implementing PBDS?
 ii. Are students eligible for Special Education services able to use learning experiences outside of school (internships, vocational education, etc.) to demonstrate proficiency in standards required for graduation?
 iii. Does your program's LMS translate and coordinate with the system used in cooperating districts?
15. Is the potential for technology use in a learning management system fully utilized in your school/district/program? If not, how could it be further developed to support PBDS and what are the barriers to doing so? If so, please explain some highlights of this system.
16. What is the predicted or estimated cost of developing and/or maintaining a robust, effective learning management system?

17. What are the supports and barriers/hurdles to development and/or maintenance of a robust, effective learning management system?
18. How much time is dedicated each year to training and supporting educators and administrative support staff in their use of proficiency-based recording or reporting tools (grading systems, curriculum materials management & sharing tools, tracking student progress, etc.)? Is this sufficient?

ACCOUNTABILITY

19. Do you believe student performance has improved due to the implementation of a proficiency-based diploma system? Identify some examples that support your belief.
20. What data does your school/district/program use to evaluate implementation and PBDS practices?
21. Describe the role student progress, proficiency level and/or student performance on assessments play in your district's educator evaluation system.
22. Describe the role student progress, proficiency level and/or student performance on assessments play in your district's administrators' evaluations.
23. What role does student progress, proficiency level and/or performance on assessments play in district/school/district/district decisions regarding staffing, course offerings/class enrollment levels, intervention opportunities (program-specific, remedial and advanced)?
24. Are there elements of the negotiated contract that prevent elements of PBDS from being implemented? If yes, how could a viable employment contract be maintained to attract, support and retain high quality employees while also supporting the implementation of a successful PBDS?
25. How do you see PBDS affecting classroom instruction? teacher effectiveness?
26. How does student progress affect the perception and expectations of your school/district/district from the school/district board? students' families? local community? larger public (region, state, post-secondary institutions, prospective employers)?
27. Are there specific issues of accountability or performance that your school/district/district has had to address that are unique to a PBDS? If so, how can/were they addressed successfully?
28. What policies or structures are in place in your district to address liability issues if a student doesn't meet proficiency expectations by age twenty?
29. What opportunities, structures and supports are in place in your school/district for students who meet proficiency expectations in less than the years of schooling they are expected to attend?

PROFESSIONAL DEVELOPMENT

30. Do all educators (including Special Education teachers and staff) and administrative leaders participate in professional development targeted for PBDS implementation?
31. Do all educators (regular education and Special Education) participate in professional development that enhances awareness and understanding of the experiences and opportunities of students who are eligible for Special Education services?
32. Does your school/district/program receive coaching or assistance from external intermediaries (e.g. school/district coach, professional collaborations, etc.)?
33. Does your school/district identify internal teacher-leaders and/or internal experts as resources for professional learning?
34. How often are educators encouraged to engage in professional learning that is content-related, as opposed to pedagogical or technical?

ROLE OF THE COMMUNITY

35. How has your greater community supported the school/district adoption to PBDS? What barriers/hurdles has it presented?

 Possible Probes:

 - How has the greater community (local professionals, businesses, other educational institutions, higher education institutions, etc.) helped to provide extended day or multiple pathways learning opportunities to your students?
 - Are the opportunities supported by the community more or less prevalent in your classroom/school since adopting PBDS?
 - How does a school/district communicate a student's achievements and proficiency levels to parents/families? Is this appropriate and fully developed? If not, how could it be improved?
 - How does a school/district communicate a student's achievements and proficiency levels to other external agencies (colleges, military, transferring institution)? Is this appropriate and fully developed? If not, how could it be improved?
 - Are there specific issues of accountability or performance that you or your school has had to address that are unique to a PBDS? If so, how can/were they addressed successfully?
 - How are students' families informed about proficiency-based high school graduation requirements as it relates to specific Special Education programming or the student's IEP?

COST OF PBDS

36. Predicting what your school/district/program will look like five years from now, do you think PBDS will be further developed, maintained or abandoned?
37. What role will costs play in the level of implementation in the next five years?
38. Identify specific cost barriers you perceive in scheduling, school/district policy, transportation, and/or fiscal resources that may prevent a proficiency-based progression system to occur as it should.
39. Identify staffing, certification and/or contractual requirements related to cost that you believe may prevent a proficiency-based progression system to occur as it should.
40. Identify specific strategies, resources and/or systemic structures (potential or currently in-place) to deal with cost issues that you feel could/do facilitate the implementation of a successful proficiency-based diploma system methods for appropriate student progress.
41. What would be the predicted or realized costs of purchasing/developing and maintaining a learning management system (integrating student records, reports and data management as much as is beneficial) that would support PBDS?
42. What would be the predicted or realized costs of purchasing/developing and maintaining curriculum and instructional materials that would support PBDS in your district?

Thank you for your time.

If I have any additional questions or need clarification, how and when is it best to contact you?

Follow-Up Non-Identifying Contact Info:

Appendix E: Special Purpose Private Schools Plan of Instruction

SPPS Plan of Instruction
Report on Transition to a Proficiency-Based System

By July 1, 2015, each SPPS must submit to the Department a Report on Transition to a Proficiency-Based System, including Evidence of Preparedness, Multi-year Implementation Plan and System of Supports for Learning, based on reporting standards and curricula being adopted from a SAU or based on SPPS-designed reporting standards and curricula.

Identifying Information

1. SPPS name:
2. Name and title of people completing this Report:

Evidence of Preparedness

3. Describe the SPPS's greatest strength and its greatest challenge as it builds infrastructure and capacity to develop and implement systems that will:
 - provide instruction based on standards-aligned curricula; and
 -evaluate and report students' progress towards meeting standards,

 in order to facilitate agreement with sending SAUs as to the terms and conditions for their awarding diplomas based on proficiency in the standards of all 8 content areas and the standards of the Guiding Principles. Limit your description to 1000 words (approximately 2 pages single spaced or four pages double spaced) and attach evidence to support your description referencing the name of the document(s) and specific page(s).

Criteria:

- Clear description of the SPPS's greatest strength and greatest challenge in transitioning to a system that prepares students to receive a proficiency-based diploma
- Clear connection between evidence submitted and description of the greatest strength and greatest challenge

Multi-year Implementation Plan

4. Provide a description of the multi-year plan to meet the goal of providing instruction based on standards-aligned curricula in order to facilitate agreement with sending SAUs as to the terms and conditions for their awarding diplomas based on proficiency in the standards of the eight content areas and the standards of the Guiding Principles. The description should include benchmarks and metrics for the 2015-2016 school year and each year thereafter included within the scope of the plan. Limit your description to 1000 words (approximately 2 pages single spaced or four pages double spaced) and attach

evidence to support your description referencing the name of the document(s) and specific page(s).

Criteria:

- Multi-year plan includes activities/actions that will support the achievement of the benchmarks and metrics to measure them.
- Evidence submitted clearly supports achievement of the benchmarks
- Evidence includes samples of standards-aligned curricula, with descriptions of instructional strategies to teach them
- Evidence includes samples of formative and summative assessments that will be used to determine students' progress towards meeting standards through multiple pathways and measures

System of Supports for Student Learning

5. Describe the system of supports you have in place for secondary school students when proficiency is not demonstrated. Limit your description to 1000 words (approximately 2 pages single spaced or 4 pages double spaced) and attach evidence to support the description referencing the name of the document(s) and specific page(s).

Criteria:

- Clear description of the practices/protocols for improving student performance and ensuring feedback is timely, specific to each student and delivered when and where it has the most benefit
- Clear description of practices for regular monitoring of student progress
- Clear description of equity of opportunity for support in any content area and Guiding Principle

The above components of the Report were based on the SAU Extension application process. More information and resources to support your work can be found at this link: http://www.maine.gov/doe/proficiency/standards/Implementprofbaseddipextreqsauawarddip.html

Appendix F: SPPS - SAU Diploma Agreement

School Year SPPS / SAU Work Recognition and Diploma Agreement

Special Purpose Private School ("SPPS"):

School Administrative Unit ("SAU"):

Maine Dept. of Ed. Chapter 101, Maine Unified Special Education Regulation Birth to Age Twenty, Section XII.2.A (1)(i) requires Special Purpose Private Schools (SPPS) to have an "[a]greement regarding how high school children will earn credits towards graduation in collaboration with the sending SAUs." The State of Maine Department of Education Annual School Approval Report for Special Purpose Private Schools, Part VII requires the SPPS to have a written agreement with the placement school administrative unit (SAU) stating that the placement school will recognize and issue credits for work completed at the SPPS and that secondary education students will receive a diploma from the placement SAU.

SPPS acts as an out-of-district placement providing educational services and does not issue high school diplomas, but provides instruction and appropriate learning experiences based upon the identified standards set forth in the Maine Learning Results, including the Guiding Principles, and collects evidence for the purpose of evaluating the attainment of proficiency in meeting those standards. In order for a student to earn a diploma from the sending school administrative unit or the school administrative unit where the residential placement is located for state agency clients, students must demonstrate proficiency in meeting standards in the content areas of the Learning Results and meet the cross-content performance standards set forth in the Guiding Principles of the Learning Results.

It is mutually agreed that throughout the time student(s) is/are attending SPPS, student(s) will work to meet the requirements for award of a diploma set forth in 20-A 4722-A, including any other graduation requirements specified by SAU. Proficiency in meeting state standards and the guiding principles will be established on the following basis:

<u>CURRICULUM (to be completed by SPPS)</u>

___ SPPS will utilize the curriculum of SAU

___ SPPS will utilize the curriculum of a different school administrative unit (specify: _____)

___ SPPS will utilize its own curriculum

PROFICIENCY (to be completed by SAU)

___ SAU will review evidence and determine proficiency

___ SAU will accept SPPS report of proficiency based on the curriculum identified above

___ Other (see explanation)

SPPS will generate a SPPS Report Card, consistent with the SPPS's grading periods (i.e. quarter, trimester), documenting the student's educational experiences during the reporting period, and send a copy to SAU at the end of each grading period. SAU will notify SPPS if there is a question or concern regarding the Report Card.

SAU will maintain the student's (students') official transcript.

SAU will inform SPPS of the graduation requirements applicable to each SAU student. Upon successful completion of all SAU graduation requirements, SAU will award student(s) an official local school administrative unit high school diploma and will issue the official high school transcript.

Date: _____

SAU Representative's Signature _____

Title: _____

SPPS Representative's Signature _____

Title: _____

This agreement must be updated annually by SPPS and each school administrative unit responsible for the special education students it serves.

Appendix G: Sample Proficiency-based High School Graduation Requirements

The following documents are high school graduation policies implemented by local Maine school administrative units (districts). These are public documents available on the SAU website, but permission was granted by the superintendent for use in this report.

IKF

GRADUATION REQUIREMENTS

Before entering high school, students need to know the standards for attaining a high school diploma in order to plan an appropriate, sequential, educational program to meet that goal.

RSU XX has adopted a proficiency-based system of learning consistent with Maine law, which means that after January 1, 2019, the awarding of a diploma will be contingent on the demonstration of proficiency in the content areas and Guiding Principles of the Learning Results rather than the accumulation of credits.

To be awarded a high school diploma from RSU XX, students graduating in the Class of 2019 and beyond must demonstrate proficiency in the content areas identified in Maine's system of Learning Results, meet the cross-content performance standards set forth in the Guiding Principles of the Learning Results, and fulfill all additional graduation requirements set by the Board.

Students graduating in the Classes of 2014-2018 must meet the credit and other graduation requirements specified in this policy.

A student who would have graduated with the Class of 2018 and have been awarded a diploma at commencement but for his/her failure to earn sufficient credits or meet other requirements set by Board policy will have until December 31, 2018 to fulfill the graduation requirements applicable to the Class of 2018.

The Superintendent, through the high school principal or other designee, shall be responsible for making accurate information concerning diploma requirements available to incoming students and their parents prior to the start of their ninth grade school year. A copy of this policy will be disseminated to all incoming ninth grade students at the time of course selection. This policy will also be included in every edition of the high school student handbook.

The Board has approved the following schedule of minimum requirements for graduation, which includes minimum requirements specified by the State of Maine. The Board is aware that current law and regulations are subject to change.

The Board expects the Superintendent/designee to inform students and parents as soon as practicable of any additional State-imposed standards that must be met before students may be awarded a high school diploma.

I. DIPLOMA REQUIREMENTS FOR STUDENTS GRADUATING IN THE CLASSES OF 2015, 2016, 2017, OR 2018

Students who anticipate graduating in the Classes of 2015, 2016, 2017, or 2018 must meet the following minimum requirements in order to be awarded a high school diploma.

The students must successfully complete a minimum number of 24 credits. Of these:

- 4 must be in English/language arts
- 3 must be in Mathematics
- 3 ½ must be in Social Studies
- 3 must be in Science
- 1 must be in Fine Arts
- ½ must be in Health
- 1 must be in Physical Education
- 2 must be in World Languages

According to state law students must demonstrate computer proficiency.

The student must also satisfactorily complete a total of 30 hours of community service.

All credits are counted equally toward graduation.

Any student attempting to earn more than 8 credits in one school year must have prior approval from the Principal.

Any student attempting to waive the World Languages requirement must have prior approval by the Principal.

STUDENTS RECEIVING SPECIAL EDUCATION SERVICES

According to Title 20-A MRSA 4722-A(3)(A), Students who achieve proficiency in meeting the content standards of the Learning Results as specified in the goals and objectives of their Individualized Education Plans (IEP) will be awarded diplomas.

[NOTE: In interpreting 20-A MRSA 4722-A(3)(A), the Maine Department of Education has stated its position that the standards are the same for students with disabilities as for all other students. The standards themselves cannot be modified. The standards articulate what students need to know or know how to do (knowledge and skills) and the IEP describes how the student will demonstrate his/her proficiency toward meeting the standards, including accommodations made to enable the student to demonstrate proficiency. All students must have the opportunity to gain and demonstrate proficiency. As long as a student demonstrates achievement of proficiency, with or without an IEP, he/she will be awarded a high school diploma. Although, ideally, every student will achieve proficiency and a high school diploma, there is a practical recognition that there may be students, with or without an IEP, who will not meet the standards.

II. DIPLOMA REQUIREMENTS FOR STUDENTS GRADUATING IN THE CLASS OF 2019 AND BEYOND

Beginning January 1, 2019, the awarding of a high school diploma from RSU XX will be contingent on the demonstration of proficiency in the content areas of Maine's system of Learning Results and meeting the cross-content performance standards of the Guiding Principles of the Learning Results, rather than the accumulation of credits.

In order to receive a diploma from RSU XX, a student graduating in the Class of 2019 or beyond must meet the requirements set by the State of Maine in 20-A MRSA § 4722-A(1)). The student must:

A. Demonstrate that he/she has engaged in educational experiences relating to English Language Arts, mathematics, and science and technology in each year of his/her secondary schooling;

Demonstrate proficiency in meeting state standards in all content areas of the system of Learning Results;

Demonstrate proficiency in each of the Guiding Principles set forth in Maine Department of Education rules governing implementation of the system of Learning Results; and

Meet the other requirements specified in section D below by the Board.

B. The student must demonstrate proficiency in each of the content areas of the system of Learning Results. Meeting the standards entails demonstrating proficiency for each standard, as articulated by RSU 21 within each content area.

The content areas are:

English Language Arts

Mathematics

Science and Technology

Social Studies

Health Education and Physical Education

Visual and Performing Arts

World Languages

Career and Education Development

C. The student must demonstrate proficiency in each of the Guiding Principles of the system of Learning Results.

A student graduating from RSU XX schools must demonstrate proficiency as a:

Clear and effective communicator;

Self-directed and life-long learner;

Creative and analytical problem solver;

Responsible and involved citizen; and

Integrative and informed thinker.

D. The student must fulfill the following requirements established by this Board:

1. Complete a capstone project through which he/she will demonstrate in-depth research, presentation, and technology application skills and evidence of proficiency in the Guiding Principles of the Learning Results.

2. Complete 30 hours of community service

MULTIPLE PATHWAYS TO THE AWARDING OF A PROFICIENCY-BASED DIPLOMA

In accordance with Maine law (20-A MRSA § 4722-A(2), students will be allowed to gain proficiency through multiple pathways and will be allowed to demonstrate proficiency by presenting multiple types of evidence.

High School's educational program is designed to enable students to satisfy graduation requirements in four years through a sequence of learning experiences/courses providing opportunities to gain and demonstrate proficiency in all of the content areas of the Learning Results and in the cross-content Guiding Principles of the Learning Results.

Students may also opt to pursue a high school diploma through multiple alternative or additional pathways including:

Early college/dual enrollment courses

Career and technical education programming

IB / AP / STEM Scholarship programming

Online/virtual learning

Apprenticeships, internships, co-op work program, and/or field work

Community service

Exchange programs

Independent study

Alternative education

Adult education

Each pathway must provide a quality learning experience comparable in rigor to the school unit's own learning experience (course) offerings.

In order to pursue one or more of the multiple/alternative pathways, a student must have a Personal Learning Plan detailing how the pathway will provide exposure to the content standards of the Learning Results and how the student will demonstrate proficiency meeting the standards. The Personal Learning Plan must be approved by the Guidance Counselor and Principal, and shared with the parent / legal guardian.

ADDITIONAL CONSIDERATIONS APPLICABLE TO THE AWARDING OF A DIPLOMA FROM HIGH SCHOOL

This section applies to all students in all graduation classes.

A. Transfer Students

For students who transfer to High School from another state or from an educational program that is not required to be aligned with the content standards of the system of Learning Results, the High School Principal shall determine the value of the student's prior educational experience towards meeting graduation requirements. This process may include a review of evidence provided by the student and / or performance on High School common assessments.

B. Home-schooled Students

For home-schooled students wishing to receive a diploma from High School, the High School Principal shall determine the value of the student's prior educational experience toward meeting graduation requirements. This process may include a review of evidence provided by the student and / or performance on High School common assessments.

C. Delayed Awarding of Diplomas

A student who leaves High School to attend an accredited, degree-granting institution of higher education may upon satisfactory completion of the freshman year be awarded a high school diploma, provided that the student has notified the principal at the time of the early admission.

D. Alternatives for Graduation

Students are encouraged to remain in high school for a full four years and to participate in as many course offerings and activities as possible. However, other options are available as indicated below, provided that all High School graduation requirements are met in time for graduation.

1. Admission to a Post-Secondary School:

This alternative is available to high school students who enroll at a post-secondary institution. Courses taken at the post-secondary institution may be applied as graduation credits / demonstration of the Learning Results proficiency standards at High School. Students are responsible for their own college admission, expenses, and for providing High School with a transcript of all courses taken at the post-secondary school.

Students in this program may graduate with their class. Students wishing to enter this program must consult with the guidance office and receive written permission for the plan.

2. Early Leaving:

Students who have completed all graduation requirements by the end of a semester, may leave school at the end of the semester. Students taking this option will not be eligible to participate in interscholastic athletics beginning on the first day of the next semester. (See procedure below.*)

3. Early Graduation:

Students who have completed all graduation requirements are entitled to a diploma and may graduate at the end of the school year. (See procedure below.*)

* Students seeking Early Leaving or Early Graduation must do the following:

Procedure
1. Meet with their Guidance Counselor
2. Fill out the appropriate forms with the Guidance Counselor
3. Set up a conference with the Principal, Guidance Counselor, and parents.
NOTE: Parental approval is necessary for either program.

E. Extended Study

Students are eligible for extended years of study to complete the requirements of a diploma if they have not reached the age of 20 at the start of the school year. Students eligible for extended years of study may be referred to a credit recovery program/summer school, adult education or other resources suitable to young learners. Extended study for students with disabilities shall be specified in the student's Individualized Education Plan.

F. Certificate of Achievement

The Board may provide a certificate of achievement to a student who leaves school having completed at least four years attendance as a full-time high school student and has participated in learning experiences/courses but has not met Learning Results proficiency standards.

G. Honors and Awards at Graduation

In order to be eligible for honors or awards based wholly or in part on academic achievement, a student must be enrolled full time at Kennebunk High School.

Legal Reference: 20-A M.R.S.A. § 4722
Cross Reference: IHBG Home School
IHBGA Participation by Home-Schooled Students in School Programs
IKFAA Special Education Graduation

Adopted: 06/01/2015

Graduation Requirements

To receive a high school diploma, students will earn a minimum of 18 credits which will be awarded through demonstrating proficiency in content area standards and the Guiding Principles.

I. Graduation Credit Requirements

In order to receive a high school diploma, students will need to earn 18 credits by receiving passing grades in courses from the following disciplines and demonstrate proficiency in the corresponding Content Standards.

A. English/Language Arts Earn 4 credits and demonstrate proficiency in the Content Standards.
B. Social Studies and History including American History, Government and Civics (a) Earn 2.5 credits and demonstrate proficiency in the Content Standards
C. Mathematics Earn 3 credits and demonstrate proficiency in the Content Standards.
D. Science (b) Earn 3 credits and demonstrate proficiency in the Content Standards.
E. Life Skills (c) Earn 1.5 credits and demonstrate proficiency in the Content Standards.
F. Fine Arts (d) Earn 1 credit and demonstrate proficiency in the Content Standards of the courses selected.
G. Applied Arts Earn .5 credit and demonstrate proficiency in the Content Standards of the courses selected.
H. Electives Earn 2.5 credits and demonstrate proficiency in the Content Standards of the courses selected.

- .5 credit of Maine Studies is required for those students who did not complete Maine Studies in grades 6, 7 or 8.
- Students who attend PATHS for two years and graduate from a program offered by PATHS only need to meet a 2 credit requirement.
- Includes 1 credit in Physical Education and .5 credit in Health.
- Art, Theater Arts, Music, Humanities, or other interdisciplinary courses outlined in the Greely High School Course Catalog.

Commencing with the Class of 2021, all students attending Greely High School must meet the following graduation requirements:

II. Demonstrating Proficiency in Content Areas

All students will demonstrate that they have achieved proficiency in the content-area graduation standards of the Maine Learning Results. Meeting the standard entails demonstrating proficiency in each of the following content areas prior to graduation:

A. English Language Arts
B. Mathematics
C. Social Studies
D. Science and Technology
E. Health Education and Physical Education
F. Visual and Performing Arts
G. World Languages
H. Career and Education Development

III. Demonstrating Proficiency in Guiding Principles

All students will demonstrate that they have achieved proficiency in the cross-curricular Guiding Principles of the Maine Learning Results.

The Guiding Principles state that each Maine student must leave school as:

A. A clear and effective communicator
B. A self-directed and lifelong learner
C. A creative and practical problem solver
D. A responsible and involved citizen
E. An integrative and informed thinker

IV. Demonstrate Proficiency through Multiple Pathways

Greely High School offers all students multiple learning options that allow students to demonstrate proficiency on expected learning standards, earn academic credit, and satisfy graduation requirements. Greely High School also encourages its students to explore a broad range of learning experiences, including outside-of-school options.

To pursue outside-of-school learning options, students must describe their learning experiences in a Personal Learning Plan, including how the experience satisfies both graduation requirements and expected cross-curricular and content-area standards.

Learning options may include, but are not limited to, the following:

A. Academic courses offered by the school
B. Dual enrollment or early college courses

C. Career and technical education programming
D. Online or blended learning options
E. Alternative or at-risk programming
F. Apprenticeships, internships, field work, or exchange experiences
G. Individualized Learning Plan, independent studies or long-term projects
H. Adult education

V. Certificates of Attendance/Unsigned Diplomas

The District does not support the awarding of certificates of attendance or unsigned diplomas. Upon written request made to the Principal, Foreign Exchange students may participate in all graduation activities, except receipt of a signed diploma.

VI. Students with Individual Education Plans

A student with a disability's IEP Team may determine that the student's disability will prevent him or her from meeting some or all of the content area standards that are otherwise required for graduation after four years of high school, and that the Student would benefit from an increased focus on transition services to facilitate his or her movement from school to post-school activities, including post-secondary education, vocational education, integrated employment, continuing adult education, and adult services. The IEP team generally should make this decision at a team meeting during the student's 9th grade year, but may do so at later times as well. Whenever this decision is made, the IEP team shall specifically identify the content areas within which the student is unable to meet standards. The IEP team shall review that decision each school year until the student finishes high school.

During each year of high school for a student identified under this Section, the IEP team shall develop goals in each of the content areas that the student has been deemed unable to meet, and those goals shall be designed to ensure meaningful, demonstrable benefits over the course of the student's school year, based on the student's disability and on his or her present level of educational performance. These goals shall be aligned with the content standards of Maine's Learning Results at the level within which the student will be working during that school year, as determined by his or her IEP team. During each year of high school, the team shall also develop appropriate and measurable post-secondary goals and transition services to facilitate the student's move from school to post-school activities.

For any student identified under this Section, the IEP team shall also determine whether the student should graduate after four years of high school, or should

continue for additional years up through completion of the school year in which the student turns 20 years old. This determination shall be based upon the best interests of the student, as determined by the Team. The IEP team generally should make this decision at a team meeting during the student's 9th grade year, but may do so at later times as well, and shall review the decision each school year afterwards.

The IEP team may not alter any credit requirements for students with disabilities for earning a regular high school diploma, but may alter the means through which particular credits are to be earned.

Greely High School shall award a regular high school diploma to any student with a disability identified under this section who has met the standards identified for graduation by the IEP team within the time period determined by the team in accordance with this section, and who has met applicable credit requirements for graduation.

No student with a disability shall have individualized graduation standards or an individualized graduation date determined by the IEP team without written parental consent, and that written consent must be obtained each school year in regard to the team's annual decisions about graduation standards and graduation date. A parent or adult student may revoke that consent in writing at any point up to the date on which the student receives a diploma.

The Director of Instructional Support shall gather data annually on the number of students with disabilities identified by IEP teams to receive individualized graduation standards, the content areas within which these individualized standards are developed, and the number of these students determined by the IEP team to graduate in four years or in more than four years.

Cross Ref.: IGAD Arts and Technology Education
ILA Tests and Assessments
Legal Ref.:
20-A M.R.S.A. §4722
CH 127 §7 (Maine Dept. of Ed. Rules)
Legal Reference: 20-A M.R.S.A. § 4722-A(3)(A), § 7202(5-A); MUSER IX.3(A)(1)(h), VI.2(C)(3)(a)-(b) (2015).

Commissioner's Informational Letter #25 – 11/15/02

Adopted: April 3, 1972
Revised: 7/10/72, 1/2/78, 8/4/80, 6/6/83, 1/5/87, 5/20/91, 6/11/03, 6/21/04
6/21/04, 3/19/07, 5/7/2012
Adopted: 3/7/2016

Appendix H: NATEF Automotive Technology Curriculum Crosswalk

An excerpt from the NATEF Automotive Technology Crosswalk of Tasks to Next Generation Science Standards is included below. Complete document can be accessed at: http://www.natef.org/NATEF/media/NATEFMedia/2014 Integrated Academics/REV-Natef-Task-Lists-Science.pdf

High School General or Applied Science - This document contains STEM initiatives and Next Generation Science Standards connections to be used as a guideline in conjunction with ***Being Relevant Matters*** , a NATEF publication on English, Math and Science integration with automotive technology at the MLR, AST, MAST program accreditation levels.

I. ENGINE REPAIR

A. General: Engine Diagnosis; Removal and Reinstallation (R & R)		**Science Principle/Concept**	AST TASK	MLR TASK
1. Complete work order to include customer information, vehicle identifying information, customer concern, related service history, cause, and correction.	P-1		X	
2. Research applicable vehicle and service information, such as internal engine operation, vehicle service history, service precautions, and technical service bulletins.	P-1	engine operation 4 stroke engine, expansion of gas, compression, flame spread, head type	X	X
3. Verify operation of the instrument panel engine warning indicators.	P-1	types of switches, sending units and switches		
4. Inspect engine assembly for fuel, oil, coolant, and other leaks; determine necessary action.	P-1	environmental issues, handling waste products	X	X
5. Install engine covers using gaskets, seals, and sealers as required.	P-1	chemistry of sealants	X	X
6. Remove and replace timing belt; verify correct camshaft timing.	P-1		X	X
7. Perform common fastener and thread repair, to include: remove broken bolt, restore internal and external threads, and repair internal threads with thread insert.	P-1	metallurgy, torque to yield	X	X
8. Inspect, remove and replace engine mounts.	P-2		X	
9. Identify hybrid vehicle internal combustion engine service precautions.	P-3		X	X
10. Remove and reinstall engine in an OBDII or newer vehicle; reconnect all attaching components and restore the vehicle to running condition.	P-3	proper lifting techniques	X	

Appendix I: American Culinary Federation and CCSS Mathematics Standards

Maine Department of Education
Career and Technical Education

Culinary Arts/Chef Training; Food Preparation (CIP: 12.0503; 12.0505)
American Culinary Federation Education Foundation (ACFEF)

Intersections with
Maine College and Career Readiness-Mathematics Standards

American Culinary Federation Education Foundation (ACFEF) **Duties, Skills, and Tasks**	**Mathematics Content Standards and The Eight Mathematical Practices** (*CCSS*)	**Demonstration of Proficiency** (Possible evidence, project, performance assessment, etc.)	**Maine Learning Results-Guiding Principles** & **Career and Education Development** (*optional*)
1. **Introduction to the Hospitality and Foodservice Industry**			
a. Define hospitality and the importance of quality customer service within the hospitality industry.			
b. Trace growth and development of the hospitality and tourism industry.	Math.HSS-IC Understand and evaluate random processes underlying statistical experiments Math.HSS-ID Interpret linear models Math Practice 2 Reason abstractly	Looking at data to help determine the growth of the hospitality industry and make inferences as to future growth. Using bar graphs to determine how many times you travel >50 miles and the reasons you travel/how you travel and use the	

American Culinary Federation Education Foundation (ACFEF) **Duties, Skills, and Tasks**	**Mathematics Content Standards and The Eight Mathematical Practices** (*CCSS*)	**Demonstration of Proficiency** (Possible evidence, project, performance assessment, etc.)	**Maine Learning Results-Guiding Principles** & **Career and Education Development** (*optional*)
	and quantitatively. Math Practice 3 Construct viable arguments and critique the reasoning of others. Math Practice 4 Model with mathematics. Math Practice 5 Use appropriate tools strategically.	information to make future decisions. Attach values to factors that help determine ratings of food service establishments and use them to determine the rating	
c. Describe the various cuisines and their relationship to history and cultural development.	Look at geography standards		
d. Outline the organization, structure and functional areas in various organizations.			
e. Identify career opportunities and the personal traits for a variety of jobs in the industry.			
f. Identify professional			

American Culinary Federation Education Foundation (ACFEF) **Duties, Skills, and Tasks**	**Mathematics Content Standards and The Eight Mathematical Practices** (*CCSS*)	**Demonstration of Proficiency** (Possible evidence, project, performance assessment, etc.)	**Maine Learning Results-Guiding Principles** & **Career and Education Development** (*optional*)
organizations and explain their purposes and benefits to the industry.			
g. Compare and contrast industry trade periodicals and other industry resources.			
2. Sanitation & Safety			
a. Identify microorganisms which are related to food spoilage and food-borne illnesses; describe their requirements and methods for growth. b. Describe symptoms common to food borne illnesses and how these illnesses can be prevented. c. Describe cross contamination and use of acceptable procedures when preparing and storing potentially hazardous foods. d. Demonstrate good hygiene and health			

American Culinary Federation Education Foundation (ACFEF) **Duties, Skills, and Tasks**	**Mathematics Content Standards and The Eight Mathematical Practices** (*CCSS*)	**Demonstration of Proficiency** (Possible evidence, project, performance assessment, etc.)	**Maine Learning Results-Guiding Principles** & **Career and Education Development** (*optional*)
habits. e. List the major reasons for and recognize signs of food spoilage and contamination. f. Outline the requirements for proper receiving and storage of both raw and prepared foods. g. Describe disposal and storage of types of cleaners and sanitizers and their proper use. h. Develop cleaning and sanitizing schedule and procedures for equipment and facilities. i. Identify proper methods of waste disposal and recycling. j. Describe appropriate measures for insects, rodents and pest control. k. Recognize sanitary and safety design and construction features of food production equipment and facilities (i.e. NSF, UL, OSHA, ADA, etc).			

American Culinary Federation Education Foundation (ACFEF) **Duties, Skills, and Tasks**	**Mathematics Content Standards and The Eight Mathematical Practices** (*CCSS*)	**Demonstration of Proficiency** (Possible evidence, project, performance assessment, etc.)	**Maine Learning Results-Guiding Principles** & **Career and Education Development** (*optional*)
l. Review Material Safety Data Sheets (MSDS) and explain their requirements in handling hazardous materials. m. Conduct a sanitation self-inspection and identify modifications necessary for compliance with standards. n. Identify the critical control points during all food handling processes as a method for minimizing the risk of food borne illness (HACCP system). o. List common causes of typical accidents and injuries in the foodservice industry and outline a safety management program. p. Discuss appropriate emergency policies for kitchen and dining room injuries. q. Describe appropriate types and use of fire extinguishers used in			

American Culinary Federation Education Foundation (ACFEF) **Duties, Skills, and Tasks**	**Mathematics Content Standards and The Eight Mathematical Practices** (*CCSS*)	**Demonstration of Proficiency** (Possible evidence, project, performance assessment, etc.)	**Maine Learning Results-Guiding Principles** & **Career and Education Development** (*optional*)
the foodservice area. r. Describe the role of the regulatory agencies governing sanitation and safety and protecting food safety.			
3. Business & Math Skills			
a. Perform basic math functions used in foodservice operations.	Middle School standards		
b. Calculate food, beverage and labor costs and percentages.	Math.HSF-IF.C Analyze functions using different representations Math.HSF-BF.A Build a function that models a relationship between two quantities Math Practice 8 Look for and express regularity in repeated reasoning. Math.HSA-CED Create equations that describe numbers or relationships	Cost vs profit determinations Calculating portion cost/ creating a menu/Revenue	
c. Demonstrate the process of costing for recipes.	Math Practice 4 Model with mathematics.	Weight/measure usable amounts of materials and using cost of the materials find the cost of the	

American Culinary Federation Education Foundation (ACFEF) **Duties, Skills, and Tasks**	**Mathematics Content Standards and The Eight Mathematical Practices** (*CCSS*)	**Demonstration of Proficiency** (Possible evidence, project, performance assessment, etc.)	**Maine Learning Results-Guiding Principles** & **Career and Education Development** (*optional*)
		recipe.	
d. Demonstrate the process of costing for recipe yield adjustment.	Math.HSA-CED.A.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.	Determine how much a recipe costs – looking at where you buy something and what it costs working from known costs. Taking in account waste and usable product. Using this to determine pricing of the final product.	
e. Determine selling price of menu items.	Math.HSA-CED.A.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. Math Practice 3 Construct viable arguments and critique the reasoning of others.	Looking at the variables that go into the selling price (constraints on recipe/ waste/cost of raw goods/etc)	
f. Describe the preparation of a guest check using current technology (i.e. computers, calculators, POS,			

American Culinary Federation Education Foundation (ACFEF) **Duties, Skills, and Tasks**	**Mathematics Content Standards and The Eight Mathematical Practices** (*CCSS*)	**Demonstration of Proficiency** (Possible evidence, project, performance assessment, etc.)	**Maine Learning Results-Guiding Principles** & **Career and Education Development** (*optional*)
etc.)			
4. Food Preparation			
a. Demonstrate knife skills and proper cuts (i.e. Julienne, Batonette, Brunoise, Paysanne, Small Dice, Large Dice, etc.) emphasizing proper safety techniques. b. Identify and demonstrate proper and safe use of food processing and cooking equipment. c. Demonstrate how to read and follow a standard recipe. d. Utilize standard weights and measures to demonstrate proper scaling and measurement techniques. e. Demonstrate a variety of cooking methods including roasting, baking, broiling, grilling, griddling, sautéing,			

American Culinary Federation Education Foundation (ACFEF) **Duties, Skills, and Tasks**	**Mathematics Content Standards and The Eight Mathematical Practices** (*CCSS*)	**Demonstration of Proficiency** (Possible evidence, project, performance assessment, etc.)	**Maine Learning Results-Guiding Principles** & **Career and Education Development** (*optional*)
frying, deep frying, braising, stewing, boiling, blanching, poaching and steaming. f. Identify and use herbs, spices, oils and vinegar's. g. Identify and prepare various meats, seafood, poultry. h. Identify and prepare various stocks, soups and sauces. i. Identify and prepare fruits, vegetables and starches. j. Identify and prepare salads, dressings and marinades. k. Identify and prepare a variety of sandwiches. l. Identify and prepare a variety of types of appetizers. m. Identify and prepare breakfast batters, meats, eggs,	n. Math.HSG-MG.A.3 Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios). Math Practice 1 Make sense of problems and persevere in solving them. Math Practice 6 Attend to precision. o. Math Practice 1	n. determining the amount of frosting needed to cover a cake/layered cake given the dimensions of the cake using surface area/volume o. cost analysis of Betty Crocker premade frosting vs making own frosting	

American Culinary Federation Education Foundation (ACFEF) **Duties, Skills, and Tasks**	**Mathematics Content Standards and The Eight Mathematical Practices** (*CCSS*)	**Demonstration of Proficiency** (Possible evidence, project, performance assessment, etc.)	**Maine Learning Results-Guiding Principles** & **Career and Education Development** (*optional*)
and cereals. n. Demonstrate food presentation techniques. o. Discuss the applicability of convenience, value added, further processed or par-cooked food items. p. Write written food requisitions for production requirements. q. Prepare standardized recipes for menu production.	Make sense of problems and persevere in solving them. Math Practice 3 Construct viable arguments and critique the reasoning of others.		

Look at financial/economical literacy from Social Studies for some of the standards.
Math Practice 5 is evident throughout the Culinary Arts in choosing what devices to use for measuring.
Math Practice 6 is also evident throughout.

Appendix J: Career & Technical Education (Part B) Interview Protocol

ADMINISTRATIVE or EDUCATOR INTERVIEW GUIDE / FOCUS GROUP PROTOCOL

District Administrators, CTE Administrators, High School Administrators, CTE teachers, etc.

School/district Name:_____Date: _____ Time: _____

Introduction: Thank you for your willingness to talk with me today. I am _____, a research associate working at CEPARE, an education policy research center at USM. We're here because the Education Committee of the state legislature commissioned a study to better understand what standards-based education looks like in Maine. And I'd like to talk to you about your role and experience with developing proficiency-based diploma systems at your school/district. We're doing interviews with administrators, teachers and staff at all of our case study districts to better understand what characterizes the challenges, needs and opportunities of a Proficiency-based Diploma System in Maine specifically as it relates to Career and Technical Education programs. The information from these interviews will be pulled together with other documents to get a sense of what is happening in your district and other districts in the state. Your participation is voluntary. This interview will only be used for the purposes of this research study and will be confidential. I will not identify you by name in the report. We request that you do your part to maintain confidentiality for all the participants by not sharing the information shared within this interview outside of the interview setting. However, please note that we cannot guarantee that all participants will maintain confidentiality after this interview. I don't think you'll be surprised by any of our questions, but you may choose to skip a question or stop the interview at anytime. The interview should last about 60 minutes. Would you mind if I record the interview? It will help me stay focused on our conversation, and it will ensure I have an accurate record of what we discussed.

Additional contextual details if participants inquire: This study was commissioned by the legislative Committee on Education and Cultural Affairs. The task of the study is to compile a fifth-year of data on the goals, needs and successes of implementing a Proficiency-based Diploma System in Maine, as directed in LD 1422 and LD 1627, which require that high school/district students earn a proficiency-based (as opposed to time-based or credit-based) diploma by 2021 with certain academic standards phased in by 2025. Findings of this study will be reported to the Education Committee early in 2017 and a public report of the study will be available the following summer. The purpose of the study is to document (NOT evaluate) some of the work being done to implement Proficiency-based Diploma Systems in Maine.

For question about the research or in the event of a research-related injury, please contact the Erika Stump at estump@usm.maine.edu or (207) 228.8117. For questions about research subjects' rights, please contact the Human Protections Administrator, University of Southern Maine at usmirb@usm.maine.edu or (207) 228-8434.

Note: Questions asked of people in different roles may vary.

Background/Opening: To start, could you tell me about your role in the school/district/district?

Role / Content Area, Grade Level Focus: _____

Years at School/district/District: _____

(PROBE: years in district, various grade levels, any experience in other related fields, past experience in education as professional if any, etc.)

UNDERSTANDING WHAT IS MEANT BY A PROFICIENCY-BASED DIPLOMA SYSTEM (PBDS)

43. Describe your vision of PBDS successfully implemented.

 Possible Probe Questions:

 - How would you define Standards-based Education? Is it distinct from or synonymous with Proficiency Based Learning?
 - How do students gain knowledge, learn new skills, improve upon prior knowledge, etc.?
 - How is student work assessed? What is the purpose of assessment?
 - How are work habits, enthusiasm for learning, collaboration and organization developed in students?
 - How do students progress through their learning goals and the education system?
 - What role do learning experiences outside of the traditional school hours and building play in all students' education?
 - How is equity maintained?

44. **What is needed (from your school, community, district, state, etc.) for your district to fully implement a proficiency-based diploma system that is successfully inclusive of students enrolled in CTE programming?

 Possible Probe Questions:

 - Predicting what your district will look like five years from now, do you think these steps to implement PBDS will be further developed, maintained or abandoned?
 - What elements did you mention that are needed that you may not have included in your district's plan/application to MDOE? Why are they not included?

45. What are the specific benefits of implementing a PBDS in your CTE program?
46. What are the specific challenges of implementing a PBDS in your CTE program?

CURRICULUM & INSTRUCTION

2. How are curriculum and instruction in CTE programming different from prior to implementing PBDS? What supporting structures and/or barriers have been a part of the change?

Possible Probe Questions:

- What past practices have been commonly discontinued? What new practices have been commonly implemented?
- Do educators use external curriculum materials, such as textbooks, packaged units, online learning units/programs, worksheets, etc.? If so, do you feel there has been an increase or decrease in these externally developed, standardized materials in curriculum and instruction since adopting PBDS?
- What role has technology played in providing instruction and curriculum to students?
- Have you received any feedback (from students, parents, or other teachers of students engaged in CTE programming) about these changes? (both broader policy and curriculum shifts, where evident)

3. Can students access courses or learning experiences outside of the school/district's offerings, e.g. online courses, college courses, advanced courses not offered by the school, content areas not offered by the school, internships, etc.? How are these course/learning experiences aligned with defined standards? How are students assessed and/or determined to be "proficient" in these courses/learning experiences?
 - What role has technology (online learning, adaptive technology, data management systems, communication, etc.) played in CTE learning experiences and students' progression through a PBDS?

PROFICIENCY BASED STUDENT PROGRESS

4. How is it determined that a student in your CTE program is proficient in the CTE content area standards required for high school graduation?
5. How does student progress in your CTE program integrate with mainstream progress towards a earning a high school diploma in their home district?

Possible Probe Questions:

- Has your school or program developed standards for guiding principles/work habits/21st century skills? If so, how is it determined when a student is proficient in these? Is this common throughout the school/program/district?
- What is the student's next step if he/she does not demonstrate proficiency on a formative assessment? What is the educator's next step if a student does not demonstrate proficiency on a formative assessment?
- What is the student's next step if he/she does not demonstrate proficiency on a summative assessment? What is the educator's next step if a student does not demonstrate proficiency on a summative assessment?
- What is the student's next step if she/he demonstrates proficiency on all standards for a content area or learning level?
- Do teachers implement deadlines at your school/district for submission of completed work? If so, what is the consequence for not meeting deadlines? If not,

what is the next step if a student fails to submit assigned work?

6. How are students placed in courses? (E.g. grade level, age, prior performance, prerequisite course completion, entrance exam, etc.) And what determines a student's change of course? program? instructor?
7. **Identify specific barriers you perceive in scheduling, school/district/program policy, transportation, and/or fiscal resources that may prevent a proficiency-based progression system to be successfully implemented.
8. **Identify specific staffing, certification and/or contractual requirements that you believe may prevent a proficiency-based progression system to be successfully implemented.
9. **Identify specific strategies, resources and/or systemic structures (potential or currently in-place) that you feel could facilitate the implementation of a successful proficiency based-diploma system.
10. ** What is the implementation timeline for your district/program to adopt approved proficiency-based high school graduation requirements for all students in all required subject areas?

LEARNING MANAGEMENT SYSTEM

11. How is student assessment data recorded, shared, accessed, and managed?
 iv. Does your school/district/program use online services or software programs to manage student work or student assessment data? If so, please identify the provider or program. What are the strengths and weaknesses of this program/service? Would you recommend it for use in other schools implementing PBDS?
 v. How does assessment information from a student's CTE learning experiences contribute to the high school graduation requirements of the student's home district?
 vi. Does your program's LMS translate and coordinate with the system used in cooperating districts?
12. **Is the potential for technology use in a learning management system fully utilized in your school/district/program? If not, how could it be further developed to support PBDS and what are the barriers to doing so? If so, please explain some highlights of this system.
13. What is the predicted or estimated cost of developing and/or maintaining a robust, effective learning management system?
14. **What are the supports and barriers/hurdles to development and/or maintenance of a robust, effective learning management system?
15. How much time is dedicated each year to training and supporting educators and

administrative support staff in their use of proficiency-based recording or reporting tools (grading systems, curriculum materials management & sharing tools, tracking student progress, etc.)? Is this sufficient?

ACCOUNTABILITY

16. **Do you believe student performance has improved due to the implementation of a proficiency-based diploma system? Identify some examples that support your belief.
17. What data does your school/district/program use to evaluate implementation and PBDS practices?
18. **Describe the role student progress, proficiency level and/or student performance on assessments play in your district's educator evaluation system.
19. **Describe the role student progress, proficiency level and/or student performance on assessments play in your district's administrators' evaluations.
20. What role does student progress, proficiency level and/or performance on assessments play in district/school/district/district decisions regarding staffing, course offerings/class enrollment levels, intervention opportunities (program-specific, remedial and advanced)?
21. **Are there elements of the negotiated contract that prevent elements of PBDS from being implemented? If yes, how could a viable employment contract be maintained to attract, support and retain high quality employees while also supporting the implementation of a successful PBDS?
22. How do you see PBDS affecting classroom instruction? teacher effectiveness?
23. How does student progress affect the perception and expectations of your school/district/district from the school/district board? students' families? local community? larger public (region, state, post-secondary institutions, prospective employers)?
24. Are there specific issues of accountability or performance that your school/district/district has had to address that are unique to a PBDS? If so, how can/were they addressed successfully?
25. What policies or structures are in place in your students' home district to address liability issues if a student doesn't meet proficiency expectations by age twenty?
26. What opportunities, structures and supports are in place in your school/district for students who meet proficiency expectations in less than the years of schooling they are expected to attend?

PROFESSIONAL DEVELOPMENT

27. Do all educators (including CTE teachers and staff) and administrative leaders participate in professional development targeted for PBDS implementation?
28. Do all educators (CTE and non-CTE) participate in professional development that enhances their awareness and understanding of the learning experiences and opportunities of students enrolled in CTE programming?
29. Does your school/district/program receive coaching or assistance from external intermediaries (e.g. school/district coach, professional collaborations, etc.)?
30. Does your school/district identify internal teacher-leaders and/or internal experts as resources for professional learning?
31. How often are educators encouraged to engage in professional learning that is content-related, as opposed to pedagogical or technical?

ROLE OF THE COMMUNITY

32. How has your greater community supported the school/district adoption to PBDS? What barriers/hurdles has it presented?

Possible Probes:

- How has the greater community (local professionals, businesses, other educational institutions, higher education institutions, etc.) helped to provide extended day or multiple pathways learning opportunities to your students?
- Are the opportunities supported by the community more or less prevalent in your classroom/school since adopting PBDS?
- **How does a school/district communicate a student's achievements and proficiency levels to parents/families? Is this appropriate and fully developed? If not, how could it be improved?
- **How does a school/district communicate a student's achievements and proficiency levels to other external agencies (colleges, military, transferring institution)? Is this appropriate and fully developed? If not, how could it be improved?
- Are there specific issues of accountability or performance that you or your school has had to address that are unique to a PBDS? If so, how can/were they addressed successfully?
- How are CTE students' families informed about proficiency-based high school graduation requirements as it relates to specific CTE programming?

COST OF PBDS

33. Predicting what your school/district/program will look like five years from now, do you

think PBDS will be further developed, maintained or abandoned?

34. **What role will costs play in the level of implementation in the next five years?
35. Identify specific cost barriers you perceive in scheduling, school/district policy, transportation, and/or fiscal resources that may prevent a proficiency-based progression system to occur as it should.
36. Identify staffing, certification and/or contractual requirements related to cost that you believe may prevent a proficiency-based progression system to occur as it should.
37. Identify specific strategies, resources and/or systemic structures (potential or currently in-place) to deal with cost issues that you feel could/do facilitate the implementation of a successful proficiency-based diploma system methods for appropriate student progress.
38. What would be the predicted or realized costs of purchasing/developing and maintaining a learning management system (integrating student records, reports and data management as much as is beneficial) that would support PBDS?
39. What would be the predicted or realized costs of purchasing/developing and maintaining curriculum and intstructional materials that would support PBDS in your district?

Thank you for your time.

If I have any additional questions or need clarification, how and when is it best to contact you?

Follow-Up Non-Identifying Contact Info:
